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National Association of Purchasing Management

Report On Business®

December 1, 1986
Volume 4, Number 12

Inventory Levels Decline Dramatically

Price Increases Outweigh Decreases 3 to 1

Purchasing Index–Slight Decline

Analysis by the Business Survey Committee; chairman, Robert J. Bretz, C.P.M., director of purchasing and distribution, Pitney Bowes, Inc.

The *Report on Business* is published monthly by the National Association of Purchasing Management, based on data compiled from replies to questions asked of purchasing managers in some 250 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification category, based on each industry's contribution to national income.

November Report

The moderate growth of the economy continued in November, say the nation's purchasing managers in their latest **Report on Business.** Production levels were up slightly over October. New orders continued their slow increase. Vendor performance was virtually unchanged but inventory and employment levels were significantly lower. For the third consecutive month, more purchasers reported higher rather than lower prices.

The report was issued today by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee and director of materials management, Pitney Bowes, Inc. Mr. Bretz said, "In November, the economy continued on what has been a moderate but stable path of expansion. The advance of new orders suggests a healthy level of production in January, after the traditional seasonal drop that can be expected in December."

The **Purchasing Managers' Composite Index** declined fractionally to 51.3% from 51.9% in October. While the index has dipped below 50% in three of the eleven months of 1986, it is interesting to note that the average of each quarter has been virtually the same (first quarter—51.2%, second quarter—50.9%, third quarter—50.3%, October to November—51.6%). A reading above 50% generally indicates that the economy is in an expanding phase: below 50%, that the economy is generally declining. The index is based on analysis by the U.S. Department of Commerce. Except for this index, the information in this report is not seasonally adjusted.

Net Difference

In each category measured, this report shows a net difference. It is the difference between the number of responses in the positive direction (higher, better, faster) and the negative direction (lower, worse, slower). Analysis of the month-to-month difference compares the rate of change.

Employment

The low level of employment declined even further in November. The 32% of members reporting lower employment is the highest since January 1983 (36%).

Employment %	Higher	Same	Lower	Net Differ.
November	9	59	32	−23
October	6	72	22	−16
September	13	60	27	−14

Buying Policy

Lead times for production materials shortened slightly, perhaps a reflection of continued good vendor delivery performance and lower inventories. The number of members reporting lead times of 30 days or less increased to 41% from 38% in October. Lead times for capital expenditures declined also as the number of members reporting lead times of 6 months and over decreased to 55% from 57% in October and 60% in September, a decided reversal. Maintenance, repair, and operating (MRO) supplies were able to be obtained faster. The 48% of members reporting buying hand-to-mouth is the highest since September 1985 (51%).

	Hand to Mouth	30 Days	60 Days	90 Days	6 Months and Longer
Production Materials %					
November	17	41	24	13	5
October	17	38	24	14	7
September	18	39	23	14	6
MRO Supplies %					
November	48	39	9	3	1
October	45	44	7	3	1
September	44	43	6	7	0
Capital Expenditures %					
November	10	5	11	19	55
October	14	3	8	18	57
September	16	3	7	14	60

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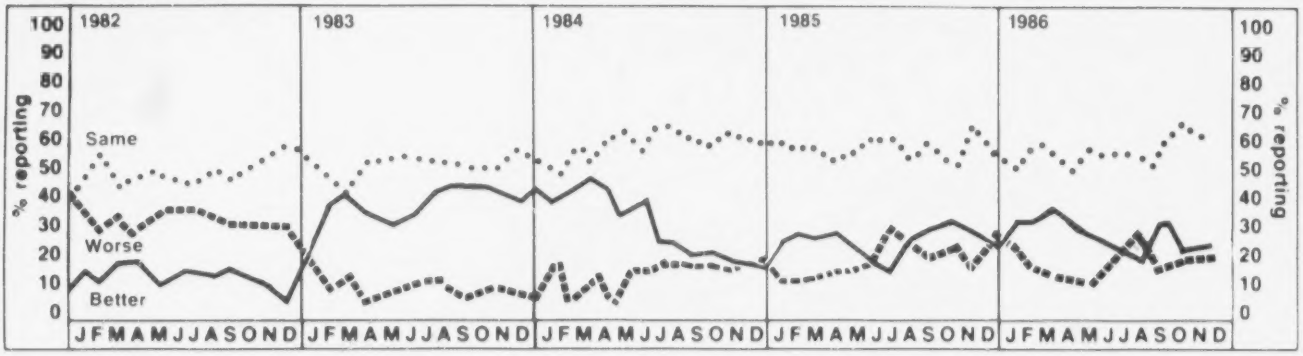
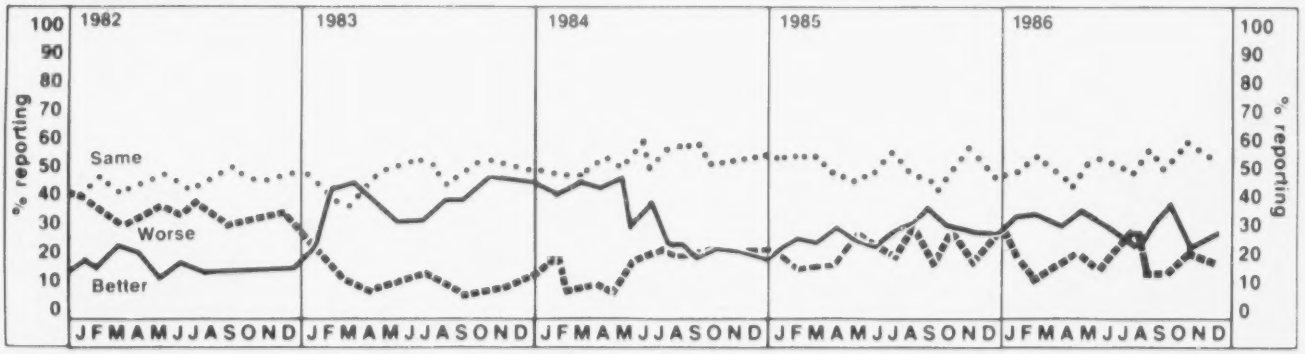
Production



As anticipated last month, production in November remained favorable with the rate of growth (+5 net difference both months) unchanged.

Production %	Better	Same	Worse	Net
November	22	61	17	+ 5
October	20	65	15	+ 5
September	27	60	13	+14

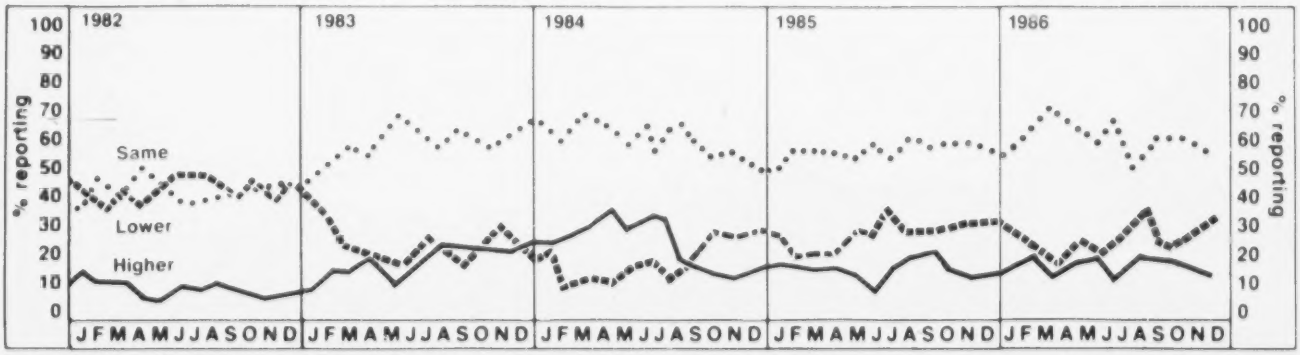
New Orders



November marks the fourth consecutive month that new orders has expanded. November's growth (+10 net difference) is greater than October (+2) and would seem to point to healthy production in January, after an anticipated seasonal drop in December.

New Orders %	Better	Same	Worse	Net
November	28	54	18	+10
October	22	58	20	+ 2
September	35	50	15	+20

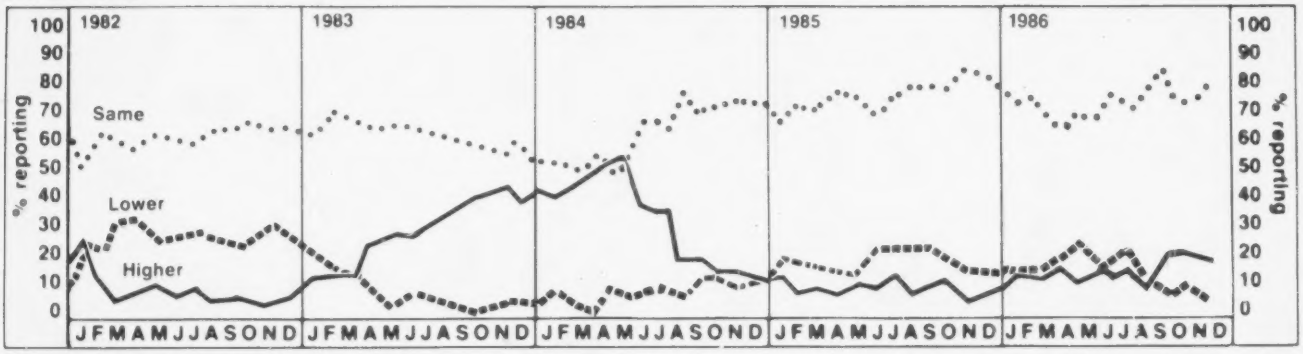
Inventories



Inventory levels declined dramatically in November. While a seasonal drop in inventories is quite often expected in November/December, the rate of this month's fall is significant. The 34% reporting lower inventory in November is the most since January 1983 (40%). (The figures in last month's October Report had been transposed, please note the correct figures for the last four months.)

Inventories %	Higher	Same	Lower	Net
November	11	55	34	−23
October	17	58	25	− 8
September	18	61	21	− 3
August	18	58	24	− 6

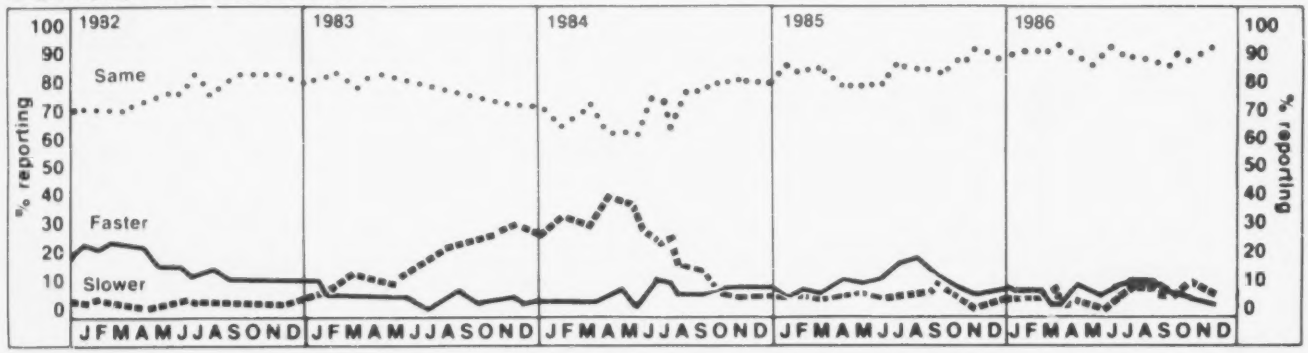
Prices



November marks the third consecutive month that members reporting higher prices exceeded those reporting lower prices by a ratio of over three to one. The 5% reporting lower prices is the lowest to do so since August 1984 (also 5%).

Prices %	Higher	Same	Lower	Net
November	17	78	5	+12
October	20	73	7	+13
September	19	75	6	+13

Vendor Deliveries



The speed of vendor deliveries continued to hold in November at levels which have varied only slightly during 1986. The 3% reporting faster deliveries is the lowest since May 1986 (2%).

Vendor Deliveries %	Faster	Same	Slower	Net
November	3	91	6	– 3
October	6	86	8	– 2
September	5	90	5	0

Specific Commodity Changes

November marks the eighth time in the past nine months that titanium dioxide was reported in short supply. However, it remains the only item reported in short supply over the last 22 months. Corrugated shipping containers continued to be reported higher in price for the eighth consecutive month. Caustic soda was reported up in price for the third consecutive month. A variety of other commodities were also reported higher in price — polyethylene, cotton goods, vegetable oils, zinc, and for the third consecutive month, steel.

UP in Price: Corrugated shipping containers, caustic soda (used heavily in paper making and petroleum refining), polyethylene (used in making plastic products), cotton goods, vegetable oils (used in food processing), steel, and zinc

DOWN in Price: Aluminum, gasoline

In SHORT Supply: Titanium dioxide (a lead-free pigment used heavily as a whitener in coatings and other industrial applications)

The National Association of Purchasing Management's *Report on Business* records the actual changes and rates of change in five important categories of data: production, new orders, employment, inventories and vendor deliveries. These five components, as reported, are not adjusted to compensate for seasonal variations.

Economists have devised a variety of formulas to compensate data for seasonal variations. N.A.P.M. cooperates with the U.S. Department of Commerce, which prepares the monthly Purchasing Managers' Composite Index for publication by N.A.P.M. The Department of Commerce adjusts the five above-mentioned components of the *Report on Business*, applies various weights to each and combines them into a single index number. The Composite Index is based on analysis by the U.S. Department of Commerce, and is the only part of the report adjusted for seasonal variations.

Note: The next issue of the *Report on Business* will be available Jan. 5, 1987.

Commodity Reports

Steel

Prepared by the N.A.P.M. Steel Committee; chairman, Daniel R. Krause, C.P.M., The Budd Company, Troy, MI.

As 1986 nears its end, we find the domestic steel industry still in a state of transition. The problems of the past (over capacity, competitive pressures from foreign producers, and the need to modernize), are not completely resolved, but considerable progress has been made these last two years.

This year, labor relations between the producers and the work force continue under stress, but with no major confrontations taking place that could endanger a continued supply of steel to the domestic consumer. More specifically, the shut-down of USX has not had a severe impact on the domestic supply of steel, and there are no reported shortages of steel except for electro-galvanized sheets, used primarily by the automotive and appliance industries. The limitation here is not because of raw material but that the electro-galvanizing facilities (many of which are new within the last two years) are not running to their rated capacity.

The world steel capacity continues to exceed the demand, and in the face of this over-capacity, many third world producers are upgrading their facilities with continuous casters to maintain their competitive position. We can anticipate, in spite of the Voluntary Restraint Agreements worked out by our government and many of the steel producing countries in the world, that these countries will aggressively pursue any opportunity in the U.S. market to increase their market share.

The major domestic mills are continuing their programs to sell or close down their marginal facilities, while on the other hand, the mini-mills are continuing to expand their product offerings.

The advantage which some offshore producers of steel had in terms of the product quality, when compared to the domestic producers, has largely been eliminated by the continuing improvement in the quality level of steel produced in the U.S. The push for this higher quality level is most apparent in the sheet products being shipped into the automotive, appliance, and office furniture industries, where surface finish is very important.

Although the major mills have announced a 3% increase in prices for hot-rolled and cold-rolled sheets, effective January 1, 1987, there is reasonable doubt, amongst many large users of these products, that this increase will indeed take place. The alert steel buyer will continue to work closely with his major suppliers to ensure a continuing supply of steel in the coming months, but, more importantly, to ensure that the pricing levels of today can be continued well into 1987.

Energy

Prepared by the N.A.P.M. Energy Committee; chairman, Howard T. Perley, C.P.M., International Paper Company, New York, NY.

Petroleum Products

OPEC agreed to a two-month extension of crude oil production quotas. Future prices showed little reaction, and moderately lower crude prices are expected in early 1987. Average crude prices should change little in the next few years. Distillates will continue to track crude prices, but exhibit their usual seasonal fluctuations. User inventories should be increased as needed to guard against winter supply interruptions. In some areas, No. 6 fuel oil is still competitive with natural gas, so 1986 demand is up. Expect demand to stay strong this winter with prices near 85% of crude. (James H. Kedrowski, Aluminum Company of America, Pittsburgh, PA)

Natural Gas

More end-users are buying directly from producers with transportation by interstate pipelines. Most purchases are short term, and since spot prices are apparently bottoming out, it could be a good time to fix 1987 prices.

Most interstate pipelines transport on an interruptible basis and users rely on local utilities for backup when needed. As local utilities reduce their long-term purchase contracts, backup service, if still available, may be costly; although direct purchases can bring big cost savings, they are not risk-free. (Ian G. Mackenzie, Corning Glass Works, Corning, NY)

Coal

Soft markets are expected to continue through the first half of 1987 due to weak demand and lower user inventories, so spot buying and favorable incoming rail rates should still be pursued. Acid rain may be a high priority legislative issue in 1987 and should be watched closely. (W. T. Robertson, Jr., Duke Power Company, Charlotte, NC)

Energy Technology

A major milestone in the development of fusion energy was recently achieved at Princeton's Plasma Physics Laboratory, where a temperature of 392 million degrees Fahrenheit was generated for one fifth of a second. This temperature — ten times hotter than the sun's core — is the highest ever achieved in a laboratory. This temperature must be sustained for fusion power to become a source of energy. Fusion generating plants, using sea water as fuel, could provide virtually unlimited supplies of energy with no radioactive byproducts. (Thomas V. Doyle, Westinghouse Electric Corporation, Pittsburgh, PA)

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National Association of Purchasing Management

Report On Business®

January 5, 1987
Volume 5, Number 1

Purchasing Index Rises Slightly to 51.8%

Price Increases Firm

Deliveries Slower

Analysis by the Business Survey Committee; chairman, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

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December Report

The economy ended the year with the same slow growth pattern in which it began, say the nation's purchasing managers in their latest **Report on Business.** Historically, both production and new orders decline in December and this year was no exception. Vendor deliveries slowed somewhat, apparently more as a consequence of the U.S. Steel strike than any other factor. Inventory levels fell significantly, again a usual occurence in December. However, the 41% of members reporting lower inventory is the highest since December 1982 (47%). Employment continued at a depressed level. More purchasers reported higher rather than lower prices by a ratio greater than 3 to 1 for the fourth consecutive month.

The report was issued today by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee and director of materials management, Pitney Bowes, Inc. Mr. Bretz said, "In December, the economy continued to grow at the same modest rate exhibited over the past five months. We would anticipate a slightly better January after the traditional seasonal dip in December."

The **Purchasing Managers' Composite Index** increased fractionally to 51.8% from 51.3% in November. The stability of this leading indicator in 1986 is noteworthy. Although falling below 50% in three of the months, the quarterly averages have shown little variance (first quarter — 51.2%, second quarter — 50.9%, third quarter — 50.8%, fourth quarter — 51.8% and a full year average of 51.1%). A reading below 50% generally indicates that the economy is in a declining phase: above 50%, that the economy is generally expanding.

Employment

Employment levels were only slightly higher in December. The number of members reporting lower employment declined to 29% from 32% in November, while the number indicating higher remained at 9%, for a net 3-point improvement in December.

Employment %	Higher	Same	Lower	Net Differ.
December	9	62	29	−20
November	9	59	32	−23
October	6	72	22	−16

Buying Policy

Lead times for production materials lengthened somewhat in December as the number of members reporting lead times of 30 days or less declined to 54% from 58% in November. This may be a reflection of the increase in past due deliveries of steel products as a result of the lengthy strike. In capital expenditures, leadtime in the important six-months-and-longer category fell for the third consecutive month to 52%, from 55% in November, 57% in October, and 60% in September. This suggests the efforts to increase capital expenditures in 1986 to beat the tax reform changes have ended. More importantly, it may be signaling that increased capital expenditures in the later months of 1986 were "borrowing" from early 1987. Lead times for MRO supplies were virtually unchanged from November.

Production Materials %	Hand to Mouth	30 Days	60 Days	90 Days	6 Months and Longer
December	17	37	27	13	6
November	17	41	24	13	5
October	17	38	24	14	7
MRO Supplies %					
December	49	37	8	5	1
November	48	39	9	3	1
October	45	44	7	3	1
Capital Expenditures %					
December	13	7	9	19	52
November	10	5	11	19	55
October	14	3	8	18	57

Semiannual Forecast

By a margin of better than 3 to 1, purchasers predict 1987 will be better than 1986. In addition, improvement in the economy is expected to continue into the first quarter of 1987 and accelerate in the second. Almost two-thirds of purchasing managers expect prices to increase over the next six months. The 64% of purchasers who see higher prices is up significantly from May (44%) and is almost twice as many as a year ago (33%). This sharp reversal of trends in price changes is confirmed by the low 6% of members forecasting lower prices, only a third of the total predicting lower prices in May (17%). Looking ahead purchasers say they will spend less on capital expenditures in 1987 than in 1986 by a ratio of 4 to 3. While 59% of members say they are concerned about the economy in the next 12 months, inflation is not a concern for purchasers, who indicate price increases will be selective and slight.

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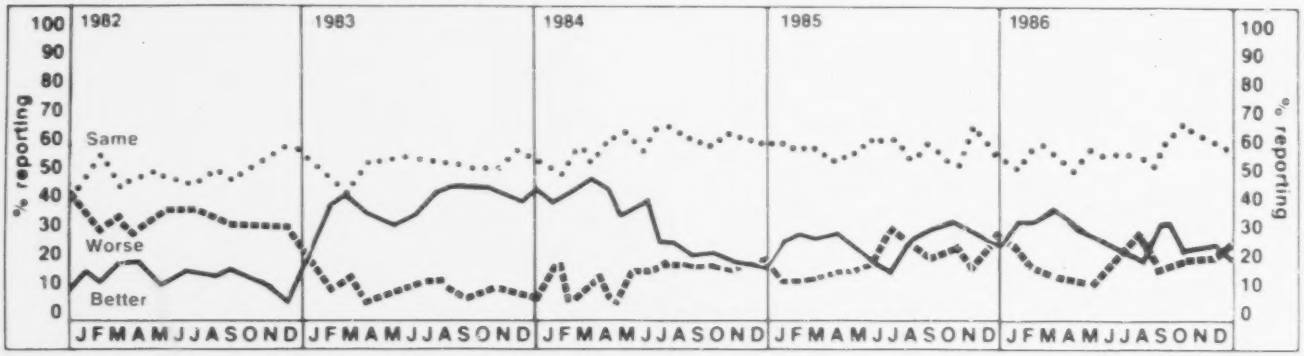
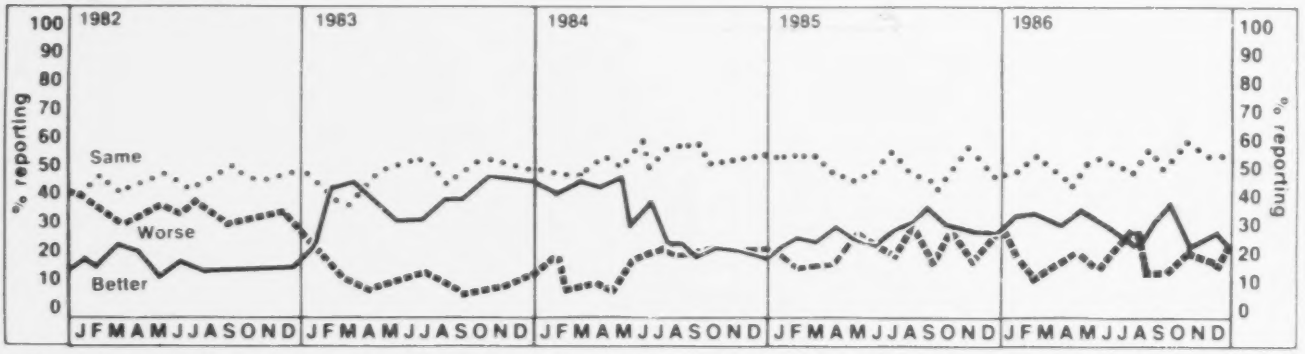
Production



After reporting four consecutive months of expanding production, purchasers reported a decline in December. More members reported worse production (25%) than better (19%) as the anticipated seasonal drop materialized. Conversely, most members expect to see production expand in January as industry replenishes lower year-end inventories.

Production %	Better	Same	Worse	Net
December	19	56	25	− 6
November	22	61	17	+ 5
October	20	65	15	+ 5

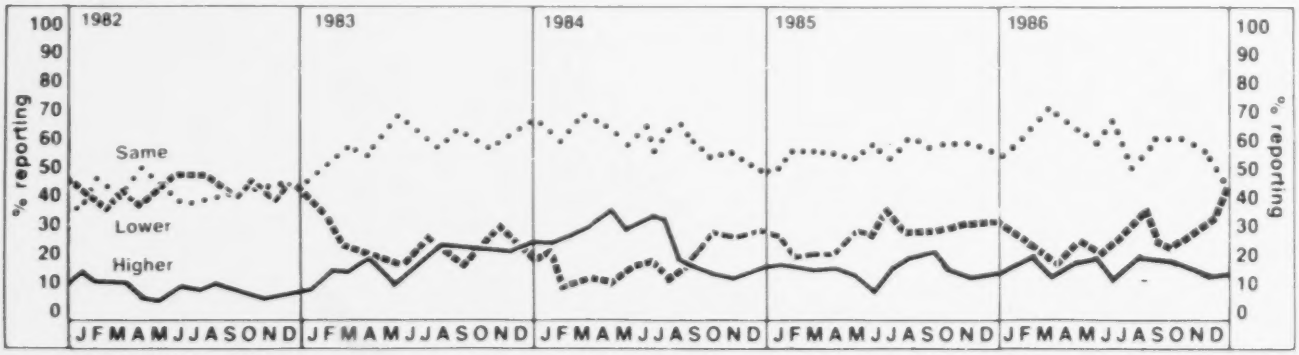
New Orders



December ended a string of four consecutive months in which new orders expanded. Slightly more members reported new orders were worse (23%) compared to better (22%). Nevertheless, most expect a pickup in January because of the extremely low inventory levels at year-end.

New Orders %	Better	Same	Worse	Net
December	22	55	23	− 1
November	28	54	18	+10
October	22	58	20	+ 2

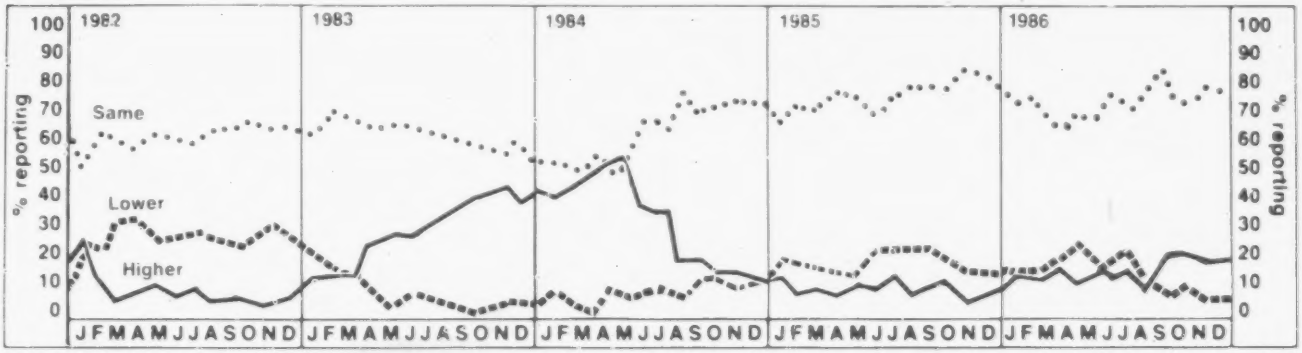
Inventories



Inventory levels plunged in December as they did in November. While low inventory is a usual occurence at the end of the year, this year's dramatically lower levels confirm the growing trend of companies to get along with less inventory.

Inventories %	Higher	Same	Lower	Net
December	12	47	41	−29
November	11	55	34	−23
October	17	58	25	− 8

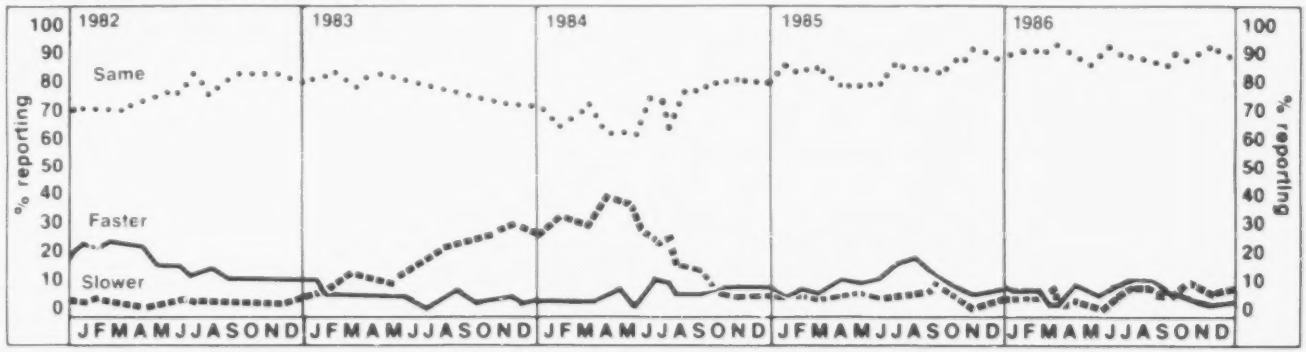
Prices



For the fourth consecutive month, more purchasers are reporting higher prices (18%) compared to lower (5%). Moreover, the ratio of those reporting higher prices has averaged over three to one during this four-month span. In its latest Semiannual Economic Forecast released December 9th, purchasing managers indicated they expected this trend to continue through the first half of 1987, but increases will be selective and slight.

Prices %	Higher	Same	Lower	Net
December	18	77	5	+13
November	17	78	5	+12
October	20	73	7	+13

Vendor Deliveries



Vendor deliveries slowed somewhat in December for the fourth consecutive month. Many purchasing managers attributed an increase in past due deliveries directly to the growing backlog in steel shipments caused by the lengthy strike at U.S. Steel.

Vendor Deliveries %	Faster	Same	Slower	Net
December	4	88	8	− 4
November	3	91	6	− 3
October	6	86	8	− 2

Specific Commodity Changes

No significant items were reported down in price in December. This is the first time, also, none were reported lower in price since April 1984. No items were reported in short supply. Titanium dioxide (a lead-free pigment used heavily as a whitener in coatings and industrial applications) had previously been reported short for eight of the previous nine months and was the only item reported short over the past 23 months. Only three items were reported up in price in December: paper, benzene, and miscellaneous lumber products. Corrugated shipping containers, after being reported higher in price for eight consecutive months, were not up in price in December.

UP in Price: Paper, Benzene (used as a chemical solvent and in motor fuels) and miscellaneous lumber products

DOWN in Price: None

In SHORT Supply: None

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Note: The next issue of the *Report on Business* will be available Feb. 2, 1987.

Commodity Reports

Wood Products

Prepared by the N.A.P.M. Wood Products Committee; chairman, Sam Craven, Pope & Talbot, Inc., Portland, OR.

After a spring and summer filled with employee strikes and mill closings, most West Coast mills are running at or near capacity (except British Columbia mills).

In British Columbia, approximately 60% of the sawmills have been on strike since mid-July. At the time of this writing, it looks as though they will be out at least until the end of the year. The most likely end to the strike will be a result of legislation. However, to date, even the legislative efforts have not been successful. The mills that are operating in British Columbia are operating at increased capacity, which has added some volume to what they previously produced. As long as these British Columbia mills are on strike, the market for fir and pine will probably remain fairly constant in regard to supply and price.

The 15% duty imposed on the Canadian lumber imports will help to hold prices steady, since American mills have raised their prices to coincide with the increase created by the duty.

Housing starts have been declining (which is normal for this time of year) and estimates for 1987 depend on which economist you listen to. With interest rates holding at their current levels, we should be looking at 1987 to pretty much parallel 1986.

NOTE: In order to provide additional meaningful columns on the Wood Products, we need input from a well-rounded segment of the industry. Anyone who would be willing to participate in this effort, should please write to the committee chairman at P.O. Box 8171, Portland, OR 97207.

Nonferrous Metals

Prepared by the N.A.P.M. Nonferrous Metals Committee; chairman, George R. A. Milne, C.P.M., Delta Faucet Co., Indianapolis, IN.

Zinc

The upward price trend in the zinc market, which was established during the second quarter of 1986, gained momentum and support well into the fourth quarter. During this period, the supply/demand relationship was strained when demand remained strong through the historically weak summer months. Due to labor strikes, maintenance shutdowns, and production problems, sufficient reporting stocks were unavailable. Unit prices increased at an average rate of $0.03/pound per month in the May to October timeframe (from $0.33/pound to $0.47/pound) before recently falling to $0.44/pound under pressure of weakening demand and announced labor settlements.

Fundamental oversupply still plagues the zinc industry. Obviously, there is still little hope for any surges in demand; therefore, barring further work stoppages or production cuts affecting zinc concentrate or metal availability, the market should continue to weaken into 1987. (Victoria P. Radick, National Steel Corporation)

Cadmium

Since mid-1986, the cadmium market has remained fairly stable with respect to supply, demand, and price. Trader activity has picked up from time to time as larger buyers came into the market and/or when shortages appeared imminent due to producer strikes or cut backs in production levels.

The strike at the major North American producer has been settled, however, the effect was not long term and market conditions settled back to the minor adjustments as they are presently. Current prices, with slight variations, are now at $1.05 to $1.15 per pound for metal, depending on quantities ordered.

The availability of cadmium in the oxide and powder form is good. Demand has increased slightly, and prices have remained fairly stable for some time and have not been influenced by the minor fluctuations in the metal prices.

Despite environmental pressures, overall consumption of cadmium has remained stable over the past decade and is in continued use in both electro and mechanical plating, batteries, pigments, plastics, and various alloys.

The short-term outlook should see no major changes in either price, supply, or demand, however, some firming of price will probably take effect midway through the first quarter of 1987 as consumers go back into the market after the year-end slow down. (Wilfred P. Brandes, Kraft Chemical Company)

Lead

The price of lead has risen dramatically from $0.19/pound in May to November's $0.29/pound level.

The primary cause for the higher prices has been Homestake Mining's purchase of Amax's portion of the Missouri mine and smelter in Buick in addition to a more recent partnership with St. Joe Lead to form the Doe Run Company. The Buick mine and smelter have remained closed since April, reducing United States output by 10,000 tons per month.

Secondary smelters are running at capacity, enjoying the sudden profitability that the higher prices have brought. However, the EPA's July 5th mandate, which requires that smelters carry environmental liability insurance, makes their future uncertain. The law has not been enforced as of yet because the insurance is not available.

United States stocks and LMS inventories have dropped a total of 127,000 tons since March to a current combined total of 76,000 tons; the lowest they have been since 1979.

We look for lead to remain readily available, but at prices higher than $0.25/pound. In 1987 prices could reach the mid $0.30/pound level. (T.A. Parker, EXIDE Corporation)

Copper

After a first half of Comex copper prices at an average of $0.64/pound, the contributing low inventory position has been reversed and stocks have been increasing, with Comex values retreating by about 10%.

Although stocks are still relatively low, 1987 production is anticipated to exceed consumption by 100,000 to 150,000 tons due to a modest increase in demand (+2%), but with sizable new production sources (+4%) starting up primarily in the U.S.

Much of this capacity will not be fully realized until the second half of 1987. In the interim, we anticipate a modest price rise early next year to, perhaps, the same levels as a year ago, with a probable retreat similar to the second half of 1986.

One major change is the U.S. producers' reaction to competitive pressures with the development of a wide array of pricing options; the principal feature — prices individually tailored to each destination location.

During this past year, there appears to be a recognition by producers that unofficial pricing actions created some distortions in market participation and these changes are a reaction to correct that. Its effect is to place all sellers of copper in a more tightly framed competitive pricing mode.

The anticipated lack of dynamics in copper prices (attributable to increasing supply) and lack of speculative interest, could change if some lengthy disruption in supply would occur; such as in Zaire, Zambia, or Chile, which is possible but not probable.

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National Association of Purchasing Management

Report On Business®

February 2, 1987
Volume 5, Number 2

Purchasing Index Rises to 55.8%

Production & New Orders Up Sharply

Prices Higher By Over 5 to 1 Ratio

Analysis by the Business Survey Committee; chairman, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

The *Report on Business* is published monthly by the National Association of Purchasing Management, based on data compiled from replies to questions asked of purchasing managers in some 250 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification category, based on each industry's contribution to national income.

January Report

The growth rate of the economy increased sharply in January, say the nation's purchasing managers in their latest **Report on Business.** The rate of growth in new orders was significant with 40% reporting better new orders, the most since April 1984 (46%). Production growth rates expanded also, coming back from a normal seasonal decline in December. The +25 net difference between the 37% reporting better production and the 12% reporting it worse is the highest since June 1984. Purchasers reported significant increases in inventory from the seasonally low December level. The Purchasing Managers' Composite Index jumped to 55.8% from 50.4% in December. This is the highest index registered since July 1984 (56.1%). For the fifth consecutive month, more purchasers reported higher rather than lower prices, this time by a ratio of over 5 to 1.

In answer to special questions, members reported there has been a definite decrease in imports with a corresponding increase in exports. Of the 75% of members whose companies export their products, 40% reported their export orders improved moderately over the past two months with 4% reporting substantial gains. Of those reporting improvements in export orders, 57% said the gain was in short cycle products (within 3 months lead time), 30% said longer cycle products and 13% indicated both. Of the 78% of members who said they purchase from off-shore suppliers, 71% reported no decrease in these purchases over the past two months, while 21% reported moderate decreases and 8% said their decreases were substantial.

The report was issued today by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee and director of materials management, Pitney Bowes, Inc. Mr. Bretz said, "After the usual seasonal dip in December, we anticipated a better economy in January, but the magnitude of this improvement is most impressive. The substantial increase in new orders suggests healthy production levels for the first quarter. Some of this improvement appears to be fueled by an increase in exports and a slight shift from off-shore purchases to domestic suppliers."

The **Purchasing Managers' Composite Index** rose significantly to 55.8% in January, mirroring the improvements in all indicators except vendor deliveries. The number reflects an update by the Department of Commerce of the seasonal adjustment factors used to calculate the Purchasing Managers' Composite Index. January's index is an increase from 50.4% in December and 50.8% in November, which have also been revised for the updated seasonal adjustment factors. A reading above 50% generally indicates that the economy is in an expanding phase: below 50%, that the economy is generally declining. The index is based on analysis by the U.S. Department of Commerce. Except for this index, the information in this report is not seasonally adjusted.

Net Difference

In each category measured, this report shows a net difference. It is the difference between the number of responses in the positive direction (higher, better, faster) and the negative direction (lower, worse, slower). Analysis of the month-to-month difference compares the rate of change.

Employment

Employment was reported higher in January than the three previous months. The net difference between those reporting higher employment (13%) and lower (20%) declined to −7%, the best since May 1986 (−4%). Nevertheless, members did not expect this rate of improvement to continue.

Employment %	Higher	Same	Lower	Net Differ.
January	13	67	20	− 7
December	9	62	29	−20
November	9	59	32	−23

Buying Policy

Lead times for production materials declined in January as the number of members reporting lead times of 30 days or less increased to 59% from 54% last month. After falling in December, lead times for capital expenditures in the significant six-months-and-longer category increased to 57% from 52%. This may be an indication that there was less "borrowing" from 1987 than was originally thought. Lead times for maintenance, repair, and operating (MRO) supplies were slightly less in January, with 88% of members reporting lead times of 30 days or less compared to 86% in December.

Production Materials %	Hand to Mouth	30 Days	60 Days	90 Days	6 Months and Longer
January	17	42	25	10	6
December	17	37	27	13	6
November	17	41	24	13	5
MRO Supplies %					
January	50	38	6	5	1
December	49	37	8	5	1
November	48	39	9	3	1
Capital Expenditures %					
January	12	3	10	18	57
December	13	7	9	19	52
November	10	5	11	19	55

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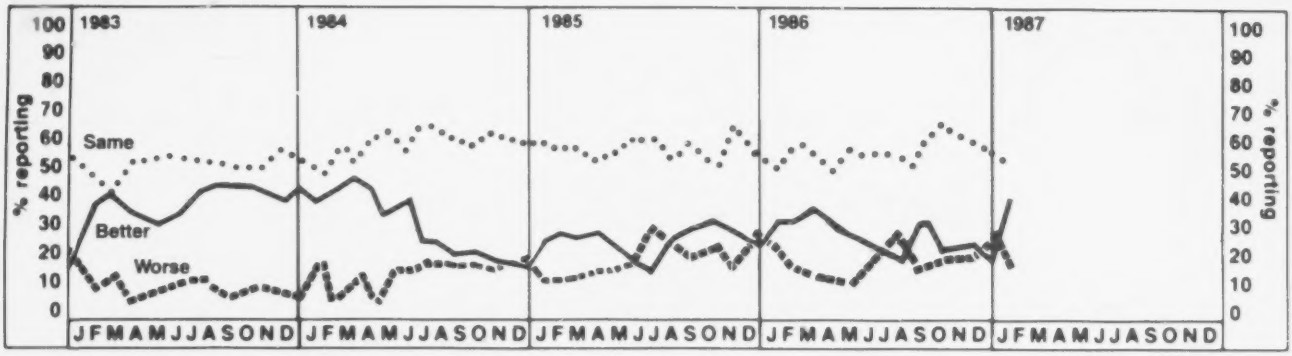
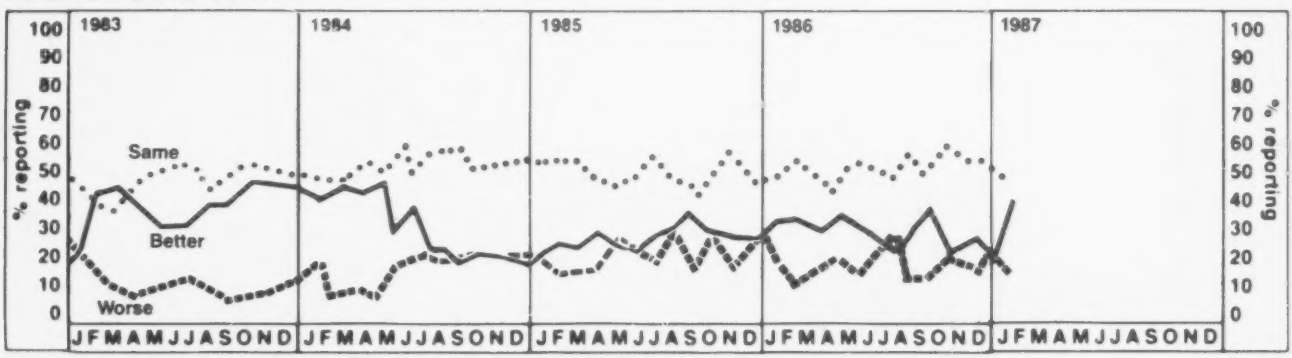
Production



The 37% of members who reported better production in January is the highest total since April 1984 (41%). The net difference between those reporting production as better compared to worse was +25. This is the largest difference since June 1984 (also +25). This improvement is significant, even when considering that January normally shows an improvement from the seasonal low in December.

Production %	Better	Same	Worse	Net
January	37	51	12	+25
December	19	56	25	− 6
November	22	61	17	+ 5

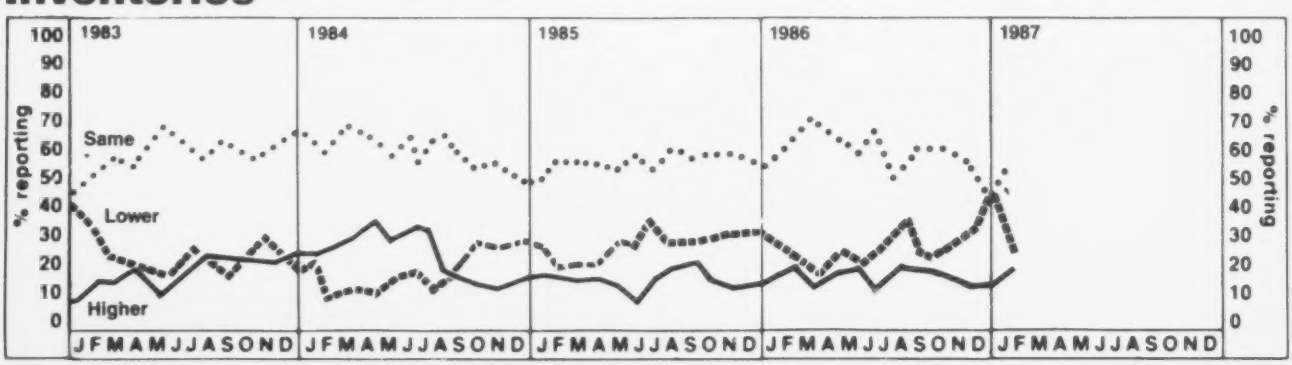
New Orders



The increase in growth was beyond most expectations. The net difference between those members reporting better new orders (40%) compared to those reporting worse (15%) is +25. This is the largest net difference since April 1984 (+40) at the peak of the current recovery. This leading indicator should be watched to see if this growth rate can be sustained.

New Orders %	Better	Same	Worse	Net
January	40	45	15	+25
December	22	55	23	− 1
November	28	54	18	+10

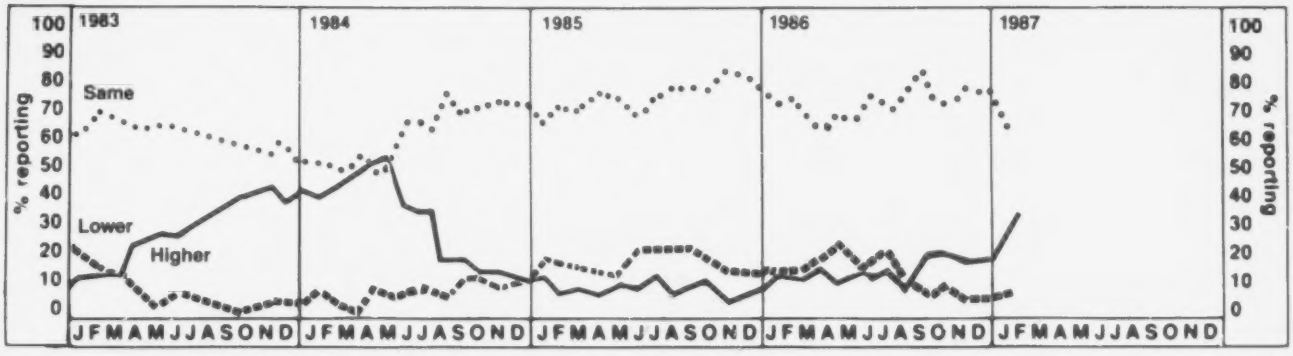
Inventories



Inventories were reported substantially higher in January after the lower than normal seasonal decline in December. The 19% who reported higher inventories is the most since May 1986 (also 19%).

Inventories %	Higher	Same	Lower	Net
January	19	56	25	− 6
December	12	47	41	−29
November	11	55	34	−23

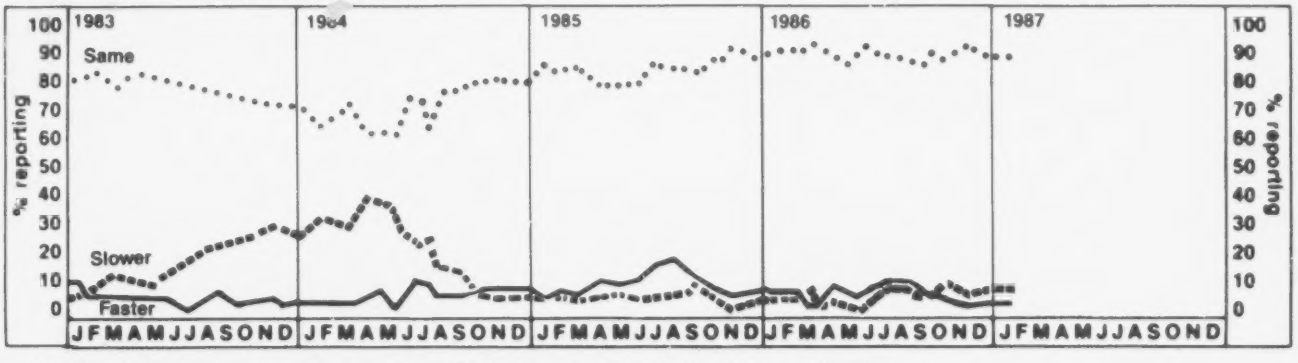
Prices



January marks the fifth consecutive month that more purchasers reported higher compared to lower prices. The 32% who reported paying higher prices in the most since May 1984 (33%). However, purchasing managers are characterizing these increases as mild and moderate.

Prices %	Higher	Same	Lower	Net
January	32	62	6	+26
December	18	77	5	+13
November	17	78	5	+12

Vendor Deliveries



Vendor deliveries were unchanged from December. January is the first month in the past five that vendor deliveries have not slowed. Many members indicating slower deliveries said they were the result of tight supplies of steel, a consequence of the lengthy U.S. Steel strike.

Vendor Deliveries %	Faster	Same	Slower	Net
January	4	88	8	– 4
December	4	88	8	– 4
November	3	91	6	– 3

Specific Commodity Changes

More items were reported up in price in January than in any month since July 1984. Most frequently mentioned as increased in price were paper, petroleum products, and steel. Also mentioned as higher priced were cotton fabric and plastic resin and products. Only corn sweeteners were reported lower in price. Titanium dioxide once again was reported in short supply, the ninth time in the past eleven months. Miscellaneous steel products also were reported in short supply, caused by the lengthy U.S. Steel strike.

UP in Price: Corrugated shipping containers, kraft linerboard (used in making corrugated shipping containers), miscellaneous paper packaging products, printing paper, cotton fabric, plastic resins and products, steel, fuel oil, diesel fuel, gasoline, and natural gas

DOWN in Price: Corn sweeteners (used in food products)

In SHORT Supply: Titanium dioxide (a lead free pigment used heavily as a whitener in coatings and other industrial applications) and miscellaneous steel products

The National Association of Purchasing Management's *Report on Business* records the actual changes and rates of change in five important categories of data: production, new orders, employment, inventories and vendor deliveries. These five components, as reported, are not adjusted to compensate for seasonal variations.

Economists have devised a variety of formulas to compensate data for seasonal variations. N.A.P.M. cooperates with the U.S. Department of Commerce, which prepares the monthly Purchasing Managers' Composite Index for publication by N.A.P.M. The Department of Commerce adjusts the five above-mentioned components of the *Report on Business*, applies various weights to each and combines them into a single index number. The Composite Index is based on analysis by the U.S. Department of Commerce, and is the only part of the report adjusted for seasonal variations.

Note: The next issue of the *Report on Business* will be available March 2, 1987.

Commodity Reports

Paper Products

Prepared by the N.A.P.M. Paper Committee; chairman, Glenn Farber, C.P.M., Vanier Graphics Corporation, Santee, CA.

The deadline for this particular report is too early to have the 1986 total year results available. However, all indications based on October data indicate another record paper year with total paper and paperboard production well outpacing the GNP. The third quarter was especially strong with total paper and paperboard production increasing at an 8.1% yearly rate.

Newsprint

The projected increase for newsprint consumption for 1986 is 2.7%. It is further projected that this consumption will decline slightly in 1987. The newsprint mills in eastern Canada are running at 97% and projections are that all newsprint mills will reach this production level by 1988 which indicates a fairly tight newsprint market approaching. Some added capacity is scheduled for October 1987. Price increases of $35.00 MT were posted for October 1, 1986 which would not be fully implemented until the first quarter of 1987. The six month forecast is for stable pricing but the longer term forecast is that this may not be the case as operating rates approach the 100% mark.

Uncoated Groundwood

This grade has been experiencing an increase in demand since mid 1986; this could be caused by seasonal demand. One respondent says supplies are tight — another says fairly available. The respondent stating fairly available does import heavily. Import supplies should be adequate since most of the decline in uncoated groundwood shipments has been at the expense of imports. The imports are down 7.6% from a similar period last year while domestic production is up a slight 1.1%. Attempts at price increases are following the newsprint increase. Continued reduced demand presents pressure on this grade by lightweight coated but this may be offset by an increased demand from forms manufacturers due to the continued price increases of forms bonds. There should be no supply problems for this grade in the near term. Overall, inventories appear to be stable.

Coated Groundwood

This commodity appears to be readily available. Supplies are adequate for both the near and long term forecast. Prices are depressed and could be decreasing further. Deliveries are four weeks or less.

Uncoated Free Sheet

This commodity continues to outpace all other grades in both domestic production and the increase of imports. Domestic production is up 8.4% and imports are running approximately 33% ahead of 1985. Forms bond shipments still lead all grades in this commodity with shipments up 13% plus. Some demand has to be accounted for by inventory building, especially in those grades experiencing repeated price increases (e.g. forms bond will receive its fourth price increase this year announced for January 1.) Availability is still adequate and two new machines are in the process of a start up. However, the sale of the Champion (Pasadena, Texas) mill to Simpson may change the product mix of that mill and thereby reduce the incremental tonnage increase of the new machines. Expect adequate supplies through most of 1987. One source expects operating rates to drop by 2% in 1987. Now that prices are back to the levels which most mills feel are profitable, there should be price stability through most of 1987.

Coated Free Sheet

Some strength is regaining in this commodity after a very weak first half of 1986. Deliveries are currently at three to five weeks; they should not get much worse. Moderate price increases are posted but it's too early to tell if they will hold or if discounting may be prevalent. Do not expect any further increases in 1987. There is a recent addition of 215,000 TPY in Maine and a recent announcement of a 1988 addition in Minnesota. Two other mills are studying additions of new machines to start late this decade.

Bleached Bristols

This commodity is also experiencing a very good increase in domestic production, growing at a 8.9% rate. Leadtimes are running at approximately one month and products are fairly available.

Paperboard/Linerboard

The paperboard/linerboard commodities are experiencing a nice 7% YTD growth over 1985. Linerboard is especially strong due to healthy increases in exports. Paperboard availability has greatly improved in recent weeks with some recent expansions now in place. Additional capacity is due shortly on SUS grades. Inventories are currently decreasing on remaining paperboard items — linerboard inventories decreased early in 1986. Prices for SUS grades are increasing early in 1987 with an increase in SBS expected later in the first quarter of 1987. Prices should be stable after these increases. There are continued announcements on linerboard increases but full industry will not support it so increases merely get announced again for a later effective date.

Pulp

World-wide supplies of pulp have decreased dramatically in 1986 and have remained down by selective downtime by major producers; this has facilitated four price increases to be implemented this past year. Since these increases now get levels back to the prediscounting days, it is anticipated that there should be price stability in pulp throughout much of 1987. This is a major requirement in order to ensure paper price stability.

Packaging and Containers

Prepared by the N.A.P.M. Packaging and Containers Committee; chairman, Carl D. Dirkse, C.P.M., S.C. Johnson & Son, Inc., Racine, WI.

Metal Cans

Supply is adequate, although some tightness is showing up due to the USX steel strike. Rumors of a price increase in the first quarter are being heard as a result of tinplate price increases. At the time of this writing, the ownership of the can companies is in turmoil.

Fibre Cans

Supply is adequate to surplus due to the conversion to plastic. Prices are relatively stable.

Glass

The supply of glass bottles continues to be tight due to plant closings. This is causing concern about possible price increases.

Molded Plastics

Availability is adequate to surplus. Some price increases are being experienced due to resin increases.

Films

There is plenty of capacity for films. Prices are firming due to resin increases.

Laminated Stock

Most members report adequate capacity as being available. As a result, prices are stable.

Metal Drums

This is an industry with more than adequate capacity. As a result prices are stable, although one member reports an increase.

Fibre Drums

This continues to be an industry with adequate to surplus availability. Some members report price increases due to linerboard increases.

Folding Cartons

This market, which has had surplus capacity for a long time, is experiencing increased demand. As a result, some price increases are being experienced.

Corrugated

Linerboard mills are running near capacity. Some spot shortages of certain linerboard grades are showing up. It appears that prices based on $320.00 per ton of linerboard are holding. Linerboard manufacturers are pushing for $350.00 per ton. It remains to be seen if they will be successful.

Bags

Supply is adequate. Some price increases are being experienced due to paper and resin increases.

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National Association of Purchasing Management

News Release

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For Release: *February 2, 1987*

U.S. DEPARTMENT OF COMMERCE MAKES ANNUAL ADJUSTMENTS TO PURCHASING MANAGERS' COMPOSITE INDEX

The Department of Commerce recently made its annual adjustment to the seasonalization factors used to calculate the Purchasing Managers' Composite Index. Economists and managers who track the index will note these changes in the January issue of the Report on Business, a monthly publication of the National Association of Purchasing Management.

The Purchasing Managers' Composite Index, based on analysis by the U.S. Department of Commerce, adjusts five components of the National Association of Purchasing Management's business survey--new orders, production, employment, vendor performance, and inventories--for normal seasonal variation, applies various weights to each, and melds them into a single monthly index number that indicates whether the ecomony is expanding or declining.

It's standard practice to project the seasonal adjustment factors used to calculate the index a year ahead by computer. The Department of Commerce then takes the actual experience for that year and adjusts the factors, impacting not only the prior year but all recent years. The old and new Composite Indexes for 1983 through 1986 are attached, as well as the 1987 projected seasonal factors. The 1987 seasonal factors will be recomputed when the actual data are known,

The National Association of Purchasing Management is an educational organization committed to providing national and international leadership in purchasing and materials management research and education. Founded in 1915, the association, through its network of over 160 affiliates and its nearly 28,000 members, provides opportunities for purchasing and materials management practitioners to enhance their professional skills and knowledge.

early, in 1988.

For more information on the Purchasing Managers' Composite Index and the Report on Business, contact the National Association of Purchasing Management, P.O. Box 418, Oradell, New Jersey 07649, (201) 967-8585.

The Department of Commerce has updated the seasonal factors used to calculate the Purchasing Managers' Composite Index. Last year's experience modified the seasonal factors that had been projected one year ago for 1986, and changed slightly the seasonal factors for earlier years. Previously-published and revised Composite Indexes are listed below, together with projected seasonal factors for 1987.

Yr./Mo.	New	Old	Diff.
1983:1	46.0	46.1	-0.1
1983:2	54.4	54.6	-0.2
1983:3	53.9	53.9	0
1983:4	54.2	54.0	0.2
1983:5	56.1	56.2	-0.1
1983:6	57.5	57.2	0.3
1983:7	63.6	63.0	0.6
1983:8	63.1	62.9	0.2
1983:9	62.5	62.8	-0.3
1983:10	64.4	64.6	-0.2
1983:11	66.0	66.2	-0.2
1983:12	69.9	70.4	-0.5
1984:1	60.5	60.9	-0.4
1984:2	61.3	61.5	-0.2
1984:3	58.9	58.9	0
1984:4	61.0	60.6	0.4
1984:5	58.6	58.7	-0.1
1984:6	58.1	57.5	0.6
1984:7	56.1	55.3	0.8
1984:8	53.0	52.9	0.1
1984:9	50.0	50.3	-0.3
1984:10	50.8	51.1	-0.3
1984:11	50.3	50.6	-0.3
1984:12	50.6	51.2	-0.6

Yr./Mo.	New	Old	Diff.
1985:1	50.6	51.1	-0.5
1985:2	49.7	49.9	-0.2
1985:3	47.7	47.5	0.2
1985:4	48.0	47.6	0.4
1985:5	47.6	47.7	-0.1
1985:6	47.8	47.2	0.6
1985:7	47.8	46.9	0.9
1985:8	47.8	47.7	0.1
1985:9	50.1	50.6	-0.5
1985:10	51.1	51.4	-0.3
1985:11	51.7	52.1	-0.4
1985:12	50.5	51.2	-0.7
1986:1	51.8	52.4	-0.6
1986:2	50.7	50.9	-0.2
1986:3	50.8	50.4	0.4
1986:4	49.3	48.7	0.6
1986:5	54.1	54.4	-0.3
1986:6	50.3	49.6	0.7
1986:7	47.8	46.7	1.1
1986:8	52.8	52.6	0.2
1986:9	52.6	53.2	-0.6
1986:10	51.5	51.9	-0.4
1986:11	50.8	51.3	-0.5
1986:12	50.4	51.8	-1.4

To compute Composite Index

1. Calculate unadjusted diffusion index for each component (percent up plus one half of percent same or unchanged). For vendor deliveries (percent slower plus one half of percent same or unchanged).
2. Divide each unadjusted diffusion index by its seasonal factor (round to one decimal place).
3. Multiply each seasonally adjusted diffusion index by its weight and sum.

1987 SEASONAL ADJUSTMENT FACTORS FOR N.A.P.M. PURCHASING MANAGERS' COMPOSITE INDEX

	New Orders	Production	Employment	Vendor Deliveries	Inventories
January	1.009	1.043	0.962	0.997	0.986
February	1.103	1.079	0.989	1.009	1.007
March	1.086	1.108	1.074	1.056	1.056
April	1.108	1.088	1.081	1.019	1.087
May	0.955	1.017	1.030	1.021	1.023
June	0.982	0.996	1.017	0.978	0.984
July	0.940	0.901	1.056	1.009	1.000
August	0.962	0.959	0.994	0.977	1.008
September	1.045	0.990	0.987	1.009	1.002
October	0.925	0.966	0.967	0.983	0.939
November	0.984	0.973	0.931	0.972	0.914
December	0.906	0.887	0.909	0.969	0.928
WEIGHT	30%	25%	20%	15%	10%

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National Association of Purchasing Management

Report On Business®

March 2, 1987
Volume 5, Number 3

Purchasing Index Slips to 51.9%

New Orders & Production Growth Slows

Prices Higher By Over 9 to 1 Ratio

Analysis by the Business Survey Committee; chairman, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

The *Report on Business* is published monthly by the National Association of Purchasing Management, based on data compiled from replies to questions asked of purchasing managers in some 250 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification category, based on each industry's contribution to national income.

February Report

The economy continued to grow in February but slowed from the sharply increased growth rate registered in January, say the nation's purchasing managers in their latest **Report on Business.** The rate of growth in new orders and production also slowed somewhat from January. However, production remained vigorous as more than three times as many members reported it better compared to worse. Vendor deliveries improved slightly but members reported steel supplies were tight as U.S. Steel gradually resumed production. An equal number of members reported inventories higher and lower. This has not happened since August 1984. For the sixth consecutive month more purchasers reported paying higher rather than lower prices, this time by a ratio of 9 to 1.

The report was issued today by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee and director of materials management, Pitney Bowes, Inc. Mr. Bretz said, "The economy continued to expand in February but at a more subdued rate than in January. The slowing in new orders should not be significant enough to dampen prospects for a respectable first quarter."

The **Purchasing Managers' Composite Index** declined to 51.9% from 55.8% in January. Nevertheless, February is the seventh consecutive month this leading indicator has registered above 50%. A reading above 50% generally indicates that the economy is in an expanding phase: below 50%, that the economy is generally declining. The index is based on analysis by the U.S. Department of Commerce. Except for this index, the information in this report is not seasonally adjusted.

Net Difference

In each category measured, this report shows a net difference. It is the difference between the number of responses in the positive direction (higher, better, faster) and the negative direction (lower, worse, slower). Analysis of the month-to-month difference compares the rate of change.

Employment

Employment in February was virtually unchanged from January which was higher than the last quarter of 1986. The rate of decline in employment in January and February is the lowest since May 1986.

Employment %	Higher	Same	Lower	Net Differ.
February	12	68	20	– 8
January	13	67	20	– 7
December	9	62	29	–20

Buying Policy

Lead times for production materials lengthened slightly in February as the number of members reporting lead times of 30 days or less decreased to 57% from 59% in January. Lead times for capital expenditures were essentially unchanged from January as the number of members reporting lead times of six-months-and-longer remained at 57% and three to six months remained at 18%. Lead times for maintenance, repair, and operating (MRO) supplies increased somewhat as only 85% reported lead times of 30 days or less, down from 88% in January.

Production Materials %	Hand to Mouth	30 Days	60 Days	90 Days	6 Months and Longer
February	17	40	22	15	6
January	17	42	25	10	6
December	17	37	27	13	6
MRO Supplies %					
February	45	40	9	5	1
January	50	38	6	5	1
December	49	37	8	5	1
Capital Expenditures %					
February	13	4	8	18	57
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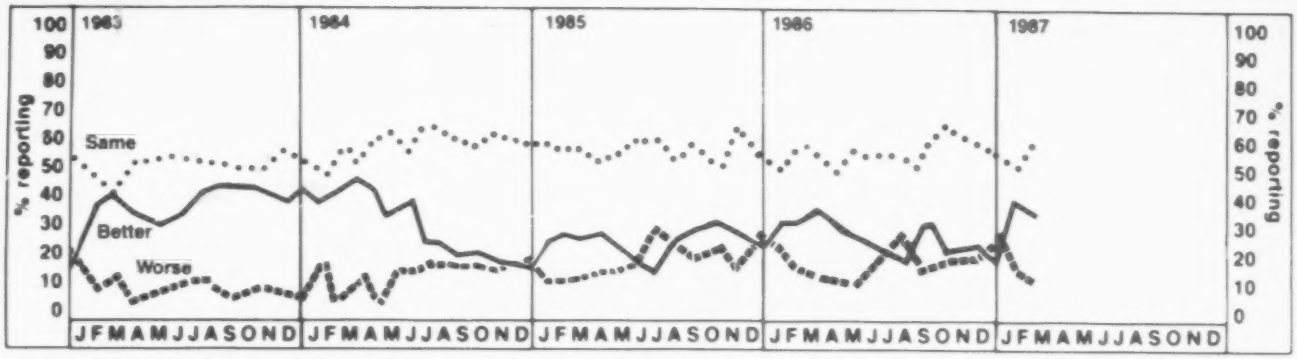
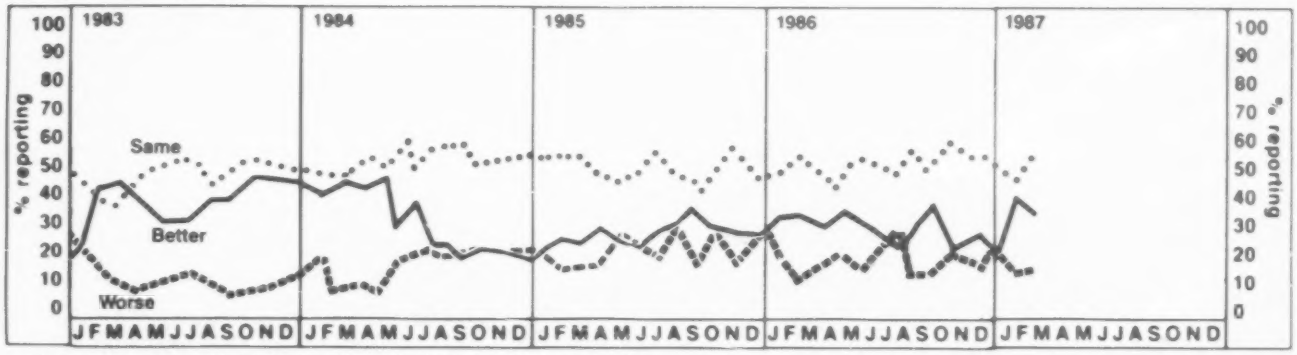
Production



Production was strong in February although not as vigorous as January. The 31% reporting better production was more than three times those reporting worse. This is the second consecutive month where the net difference between better and worse was significant.

Production %	Better	Same	Worse	Net
February	31	60	9	+22
January	37	51	12	+25
December	19	56	25	− 6

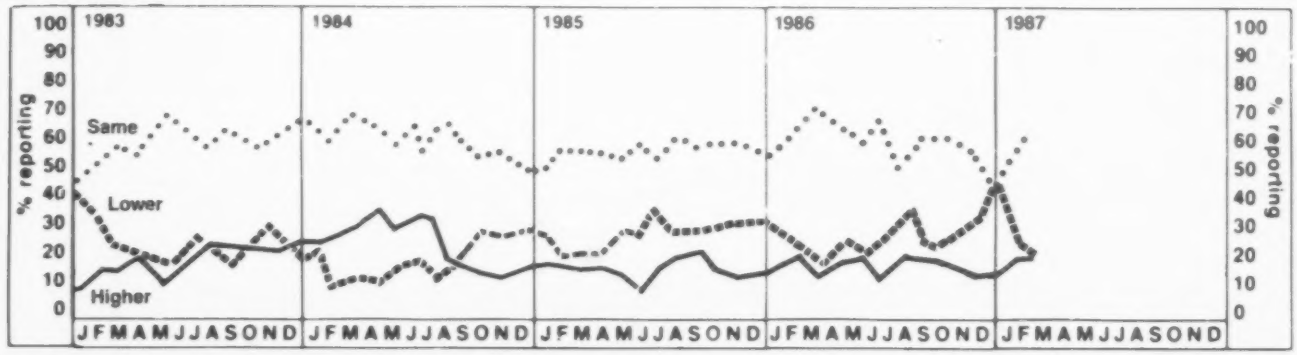
New Orders



New orders slowed in February. Nevertheless, the 33% of members reporting new orders as better is more than twice the number reporting than worse (16%) and virtually assures a good first quarter.

New Orders %	Better	Same	Worse	Net
February	33	51	16	+17
January	40	45	15	+25
December	22	55	23	− 1

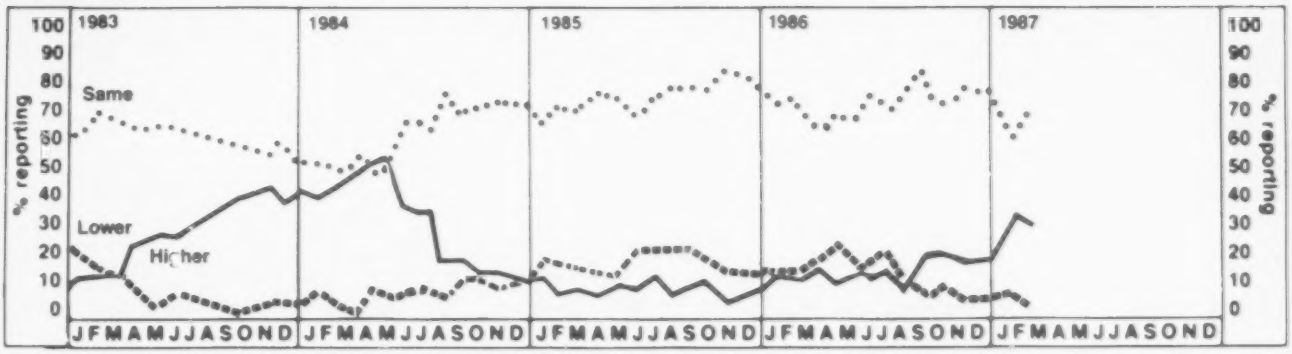
Inventories



Purchasers appeared to have ended their reduction in inventories, at least temporarily. After 29 consecutive months of declining inventories, the same number of members (19%) reported an increase and decrease. Some members indicated buying ahead to reduce the effects of price increases.

Inventories %	Higher	Same	Lower	Net
February	19	62	19	0
January	19	56	25	− 6
December	12	47	41	−29

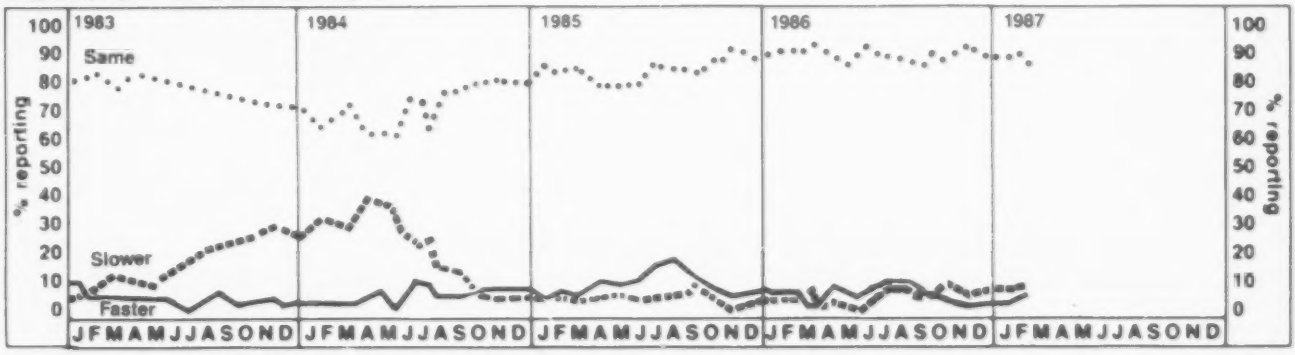
Prices



Purchasers continued to report paying more for the items they purchase. In February, 28% reported higher prices and only 3% reported lower prices. The 3% indicating lower prices is the lowest since May 1984 (also 3%).

Prices %	Higher	Same	Lower	Net
February	28	69	3	+25
January	32	62	6	+26
December	18	77	5	+13

Vendor Deliveries



Vendor deliveries were slightly better than the past two months. Although the number of members reporting slower delivery performance increased to 9% from 8% in the last two months, the number reporting faster deliveries increased more, to 7% from January and December's 4%.

Vendor Deliveries %	Faster	Same	Slower	Net
February	7	84	9	− 2
January	4	88	8	− 4
December	4	88	8	− 4

Specific Commodity Changes

No significant items were reported down in price in February; since April 1984 this occurred only once before, in December 1986. Titanium dioxide was reported in short supply in February, the tenth time in the past twelve months. Corrugated shipping containers were reported higher in price for the tenth time in the last eleven months. Steel, fuel oil, gasoline, and printing paper were reported up in price for the second consecutive month. Also reported as higher prices in February were aluminum and benzene.

UP in Price: Corrugated shipping containers, printing paper, aluminum, steel, fuel oil, gasoline, and benzene (used as a chemical solvent and in motor fuels)

DOWN in Price: None

In SHORT Supply: Titanium dioxide (a lead free pigment used heavily as a whitener in coatings and other industrial applications)

The National Association of Purchasing Management's *Report on Business* records the actual changes and rates of change in five important categories of data: production, new orders, employment, inventories and vendor deliveries. These five components, as reported, are not adjusted to compensate for seasonal variations.

Economists have devised a variety of formulas to compensate data for seasonal variations. N.A.P.M. cooperates with the U.S. Department of Commerce, which prepares the monthly Purchasing Managers' Composite Index for publication by N.A.P.M. The Department of Commerce adjusts the five above-mentioned components of the *Report on Business*, applies various weights to each and combines them into a single index number. The Composite Index is based on analysis by the U.S. Department of Commerce, and is the only part of the report adjusted for seasonal variations.

Note: The next issue of the *Report on Business* will be available April 6, 1987.

Commodity Reports

Steel

Prepared by the N.A.P.M. Steel Committee; chairman, Daniel R. Krause, C.P.M., The Budd Company, Troy, MI.

The USX strike, coupled with the long awaited steel import reductions, as mandated by the Voluntary Restraint Agreements (VRA's), has caused a temporary short fall in the availability of selected sheet steel products in the United States.

This shortfall, in turn, has given the major steel mills the opportunity to increase the prices of their products. At the present time, these increases have, for the most part, only affected the spot buy market distributors and smaller purchasers, but not the major contract steel buyers.

Whether or not these price increases will be supported will depend upon several factors, i.e., the aggressiveness of the USX pricing policy as it re-enters the market; the continued adherence to the VRA percentages; the yen-dollar relationship; and sales levels of the automotive and appliance markets.

As 1987 begins, we still find a domestic steel industry with too much capacity, which is really the key problem to becoming profitable. If USX follows the lead of Wheeling-Pittsburgh and LTV in making significant capacity reductions, then the market may support the current price increases. On the other hand, these capacity reductions will take time and, if so, we may again see a buyer's market in mid-1987.

In the long term, world-wide steel capacity exceeds demand, with some capacity reductions taking place in both Europe and Japan. Some of the other countries under VRA's are also taking a more cautious attitude toward adding extra capacity.

When some of the new markets for steel products (i.e., China) start to demand more from an industry that has trimmed back to survive, we may again see a strong seller's market, supporting price levels which could lead to the return to profitability of the domestic steel industry.

When this occurs, our domestic steel industry should be well placed to provide high quality products at competitive prices to the user, and at a profit. These prices will be higher than today's level, but, lower and more competitive as compared to world-wide pricing.

Other factors will, of course, tend to affect both the near and long-term possibilities. Some of these will include import regulations, VRA continuation, management restraint, Union/Management relationships, and the level of activity of the steel intensive capital goods industries.

For those who are not doing so, this may be the year for the alert steel buyer to determine what long-term steel sourcing arrangements should be made for the future. (Submitted by Robert C. Smith, Jr., Kelsey-Hayes Company, Romulus, MI.)

Energy

Prepared by the N.A.P.M. Energy Committee; chairman, Howard T. Perley, C.P.M., International Paper Company, New York, NY.

Petroleum Products

OPEC's agreement in late December to establish crude oil production ceilings, quickly raised world crude oil prices by about $4.00 per barrel. This, coupled with stronger demand due to abnormally cold weather in Europe and U.S., caused residual fuel oil prices to rise sharply, with winter heating oil prices following suit.

However, residual fuel and heating oil prices have now dropped substantially with warmer weather in Europe; they are both expected to stay near their current levels until spring weather approaches.

Natural Gas

Due largely to the rise in oil prices, spot market gas prices firmed up in late 1986 after declining steadily for almost three years. Nearly one-third of industrial gas usage, and almost all of the gas used by electric utilities, is readily interchangeable with fuel oil, so spot gas prices generally react within weeks to shifts in fuel oil prices, particularly in the spring and summer. Short term or spot gas purchases now account for about a quarter of U.S. consumption, but purchases by gas utilities under long-term contracts — which represent most of the balance — generally lag behind changes in oil prices by several months due to regulatory delays.

If oil prices stay in the range of $15 to $22 per barrel, prices at the wellhead will likely range from $1.50 to $2.25 per million BTUS. Higher prices are unlikely because available suppy still exceeds demand by a substantial amount.

"Natural Gas Transportation — Your 'Pipeline' to Profits" will be explored in depth on May 5, 1987, in Session SE of the Annual International Purchasing Conference in New York. Be sure to participate. (Ian G. Mackenzie, C.P.M., Corning Glass Works, Corning, NY)

Coal

1986 production and consumption were slightly less than in 1985, but modest increases for both are projected in 1987. Barring some unforeseen event, 1987 market conditions should almost mirror 1986 and continue soft. Although the United Mine Workers now represent a minority of U.S. production, their contract expires in January 1988, and a strike is possible. This situation bears watching as the year progresses, because prices may strengthen near year-end as the result of a strike. Congressional efforts to enact acid rain legislation in 1987 should also be watched closely. (W. T. Robertson, Jr., C.P.M., Duke Power Company, Charlotte, NC)

4/8/87 A6910-1

National Association of Purchasing Management

Report On Business®

April 6, 1987
Volume 5, Number 4

New Orders Up Sharply

Purchasing Index Rises to 53.9%

Employment Increases

Analysis by the Business Survey Committee; chairman, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

The *Report on Business* is published monthly by the National Association of Purchasing Management, based on data compiled from replies to questions asked of purchasing managers in some 250 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification category, based on each industry's contribution to national income.

March Report

The economy continued its growth in March at an improved rate over February, say the nation's purchasing managers in their latest **Report on Business.** The improvement was evident in all indicators except inventories, which declined slightly. New orders increased sharply in March. Production was also higher. Vendor deliveries slowed, another sign that the economy improved in March. Employment expanded for the first time since August 1984. Fifty percent of purchasing managers said they were paying higher prices in March then at the end of 1986. Of those paying higher prices now, the average increase is 2.5%. The estimated average price increase anticipated by members for the remainder of 1987 is 2.1%. So, while prices continue to increase, most purchasers do not see them as being significant.

The report was issued today by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee and director of materials management, Pitney Bowes, Inc. Mr. Bretz said, "The economy ended the first quarter with healthy, if not substantial, improvement. The sharp rise in the growth of new orders assures a good beginning for the second quarter."

The **Purchasing Managers' Composite Index** increased by two points to 53.9% from 51.9% in February. The first quarter average for this leading indicator is also 53.9%. Past experience indicates that if this average were to continue for the remainder of 1987, it would be consistent with real GNP growth of about 3%. Last year's Purchasing Managers' Composite Index average of 51.1% tracked accurately to real GNP growth, based on analysis by the U.S. Department of Commerce. A reading above 50% generally indicates that the economy is in an expanding phase: below 50%, that the economy is generally declining. The index is based on analysis by the U.S. Department of Commerce. Except for this index, the information in this report is not seasonally adjusted.

Net Difference

In each category measured, this report shows a net difference. It is the difference between the number of responses in the positive direction (higher, better, faster) and the negative direction (lower, worse, slower). Analysis of the month-to-month difference compares the rate of change.

Employment

Employment increased in March after 29 consecutive months of decline. The 16% reporting higher employment is the most since March 1985 (also 16%). The 14% reporting lower employment is the lowest since September 1984 (also 14%). The last time employment was reported increasing was in August 1984 (also +2%).

Employment %	Higher	Same	Lower	Net Differ.
March	16	70	14	+ 2
February	12	68	20	− 8
January	13	67	20	− 7

Buying Policy

Consistent with the strengthening economy, lead times for production materials lengthened for the second consecutive month as the number of members reporting lead times of 30 days or less decreased to 55% from 57% in February and 59% in January. Lead times for maintenance, repair and operating (MRO) supplies were slightly longer as 87% of members reported lead times of 30 days or less, up from 85% in February. Lead times for capital expenditures were somewhat less as the number of members reporting lead times of 6-months-and-longer declined to 56% from 57% in February, and the number reporting lead times of 90 days dropped to 14% from 18% in February.

	Hand to Mouth	30 Days	60 Days	90 Days	6 Months and Longer
Production Materials %					
March	18	37	26	13	6
February	17	40	22	15	6
January	17	42	25	10	6
MRO Supplies %					
March	44	43	8	3	2
February	45	40	9	5	1
January	50	38	6	5	1
Capital Expenditures %					
March	13	5	12	14	56
February	13	4	8	18	57
January	12	3	10	18	57

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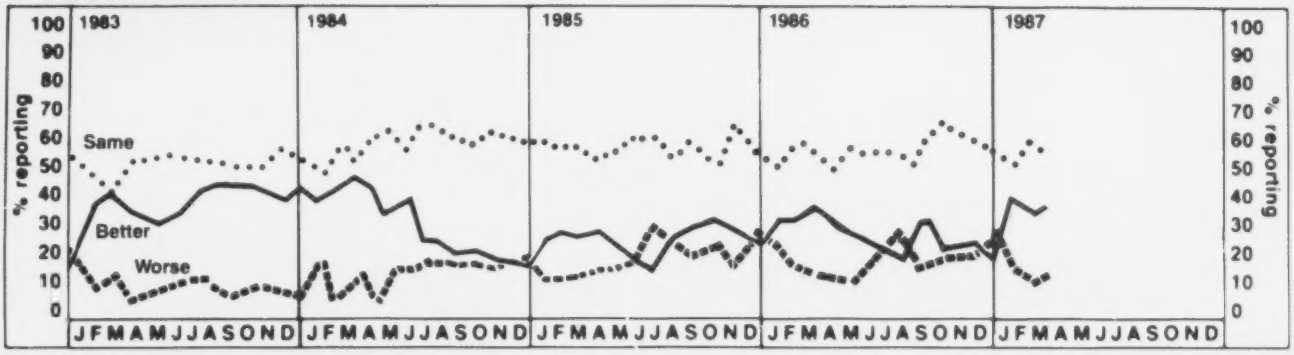
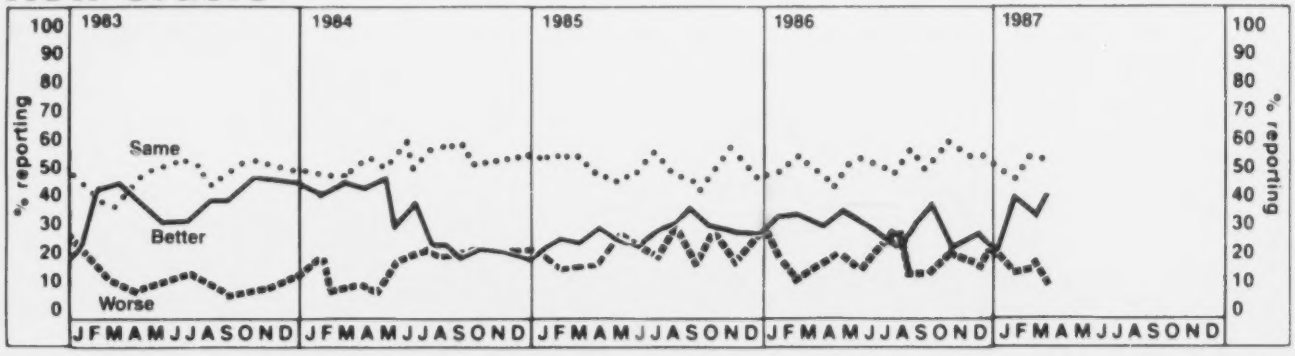
Production



Production was slightly improved in March over February. For the second consecutive month, the number of members reporting production as better (34%) was more than three times those reporting worse (11%).

Production %	Better	Same	Worse	Net
March	34	55	11	+23
February	31	60	9	+22
January	37	51	12	+25

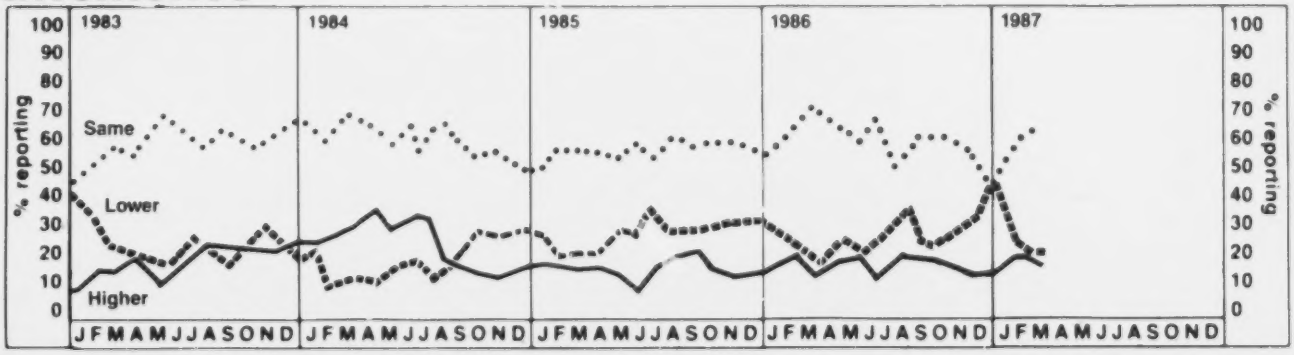
New Orders



New orders advanced at a faster pace in March. The 41% reporting new orders as better is the highest total since April 1984 (46%). The net difference between those reporting better (41%) and worse (9%) increased to 32%, also the largest since April 1984 (+40%). This signals there will be an increase in production for April.

New Orders %	Better	Same	Worse	Net
March	41	50	9	+32
February	33	51	16	+17
January	40	45	15	+25

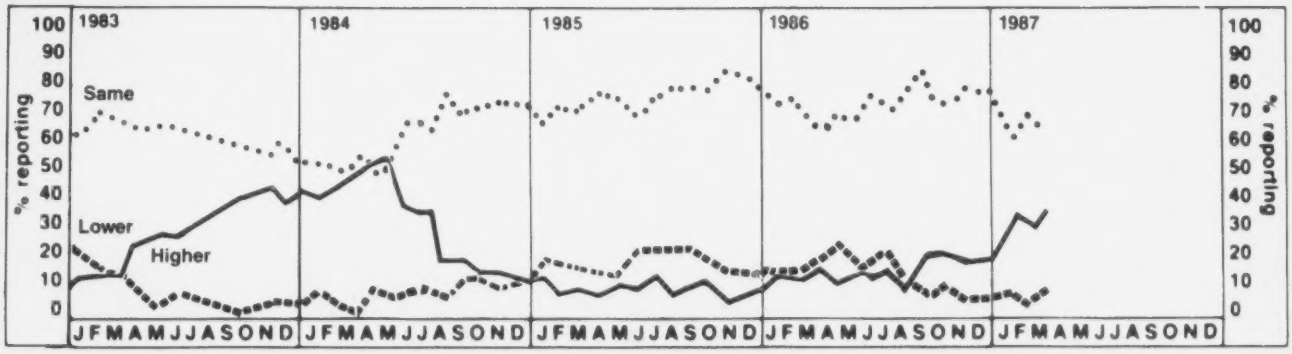
Inventories



Purchasers have again reduced their inventories. In February, after 29 consecutive months of declining inventories, an equal number of members (19%) reported higher and lower inventories. In March, while 19% again reported lower inventory, only 16% reported higher, a net decline of 3%.

Inventories %	Higher	Same	Lower	Net
March	16	65	19	− 3
February	19	62	19	0
January	19	56	25	− 6

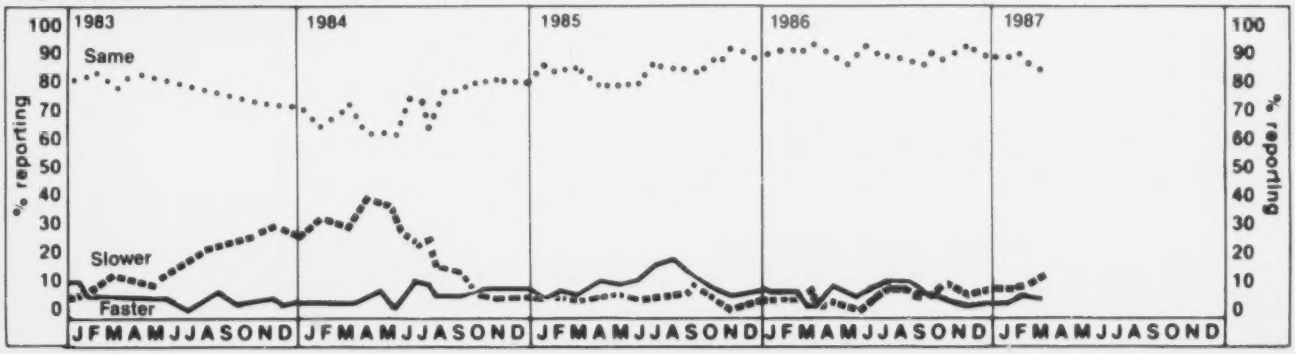
Prices



March was the seventh consecutive month that more purchasing managers reported paying higher rather than lower prices. The percentages reported in March are identical to those of January. The ratio of those paying higher prices to those paying lower is over 5 to 1.

Prices %	Higher	Same	Lower	Net
March	32	62	6	+26
February	28	69	3	+25
January	32	62	6	+26

Vendor Deliveries



Vendor deliveries slowed in March, a result of the recently settled U.S. Steel strike. Thirteen percent reported slower deliveries, the highest since September 1984 (14%). The net difference between slower (13%) and faster (5%) deliveries is −8%, the most bullish since August 1984. The change is likely the result of an improving economy.

Vendor Deliveries %	Faster	Same	Slower	Net
March	5	82	13	− 8
February	7	84	9	− 2
January	4	88	8	− 4

Specific Commodity Changes

For the second consecutive month, no significant items were reported down in price. Four items were reported in short supply: three chemicals (benzene, butadiene, and phenol) and steel (a consequence of the gradual start up in production at U.S. Steel after a lengthy strike). Numerous plastic resins, plastic producing chemicals, and plastic materials were reported higher in price in March. Paper products were also higher priced, including corrugated shipping containers (the eleventh time in the past 12 months), kraft linerboard and caustic soda, heavily used in making paper. Three metals were also reported higher in price: copper, aluminum (second consecutive month), and steel (the sixth time in the past seven months). In addition to caustic soda and plastic making chemicals, three other widely used chemicals were reported higher in price: benzene, butadiene, and methanol.

UP in Price: Corrugated shipping containers, kraft linerboard (used in making corrugated shipping containers), printing paper, caustic soda (used heavily in petroleum refining and paper making), aluminum, copper and copper products, steel, vegetable oils (used in prepared foods), styrene (used chiefly in making synthetic rubber, resins, and plastics), plastic resins and products, phenol and phenolic resins (used in making plastic products for housing and auto products), benzene (used as a chemical solvent and in gasoline), butadiene (used in making synthetic rubber), methanol (used heavily as a solvent and in synthesizing other chemicals)

DOWN in Price: None

In SHORT Supply: Steel, butadiene, styrene, and phenol

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Note: The next issue of the *Report on Business* will be available May 4, 1987.

Commodity Reports

Textiles

Prepared by the N.A.P.M. Textile Committee; chairman, Gerry Korver, C.P.M., K-Products, Inc., Orange City, Iowa.

Cotton, Polyester, Greige Goods

Fluctuating cotton prices and the continued re-emphasis on domestic manufacturing, contributed to an unusual market during the past several months. Cotton fell to the low thirties and has recently been in the high fifties. This has caused quite a bit of price pressure in both directions. The price increases have been tied to replacement costs of cotton with supply/demand being the major pressure point. Yarn prices are up 10¢ to 15¢ since October. They seem to have leveled temporarily. There is a significant shortage of spinning capacity at the present time with expansion programs being implemented. The impact of these will be seen in late 1987 and early 1988. The product category that seems to be having the most significant impact is fleece. This is primarily in cotton/acrylic and poly/cotton blends.

The polyester and acrylic staple areas appear to be stable in price. There are supply problems that are having to be handled very carefully based upon vendor relationships. The indication is, there are no expected price increases, at least through the first half of the year; if the business climate continues into the second half of this year this will probably change. The nylon and polyester filament areas have not changed a great deal with fabric prices being able to be maintained in the knit areas. The woven areas have seen pressure due to supply demand with nylon and cotton fabrics inching up in the 2% to 3% category.

Carpet

The supply of raw materials for carpet manufacturing are adequate with only nylon filament being somewhat tight. Prices of most man-made fibres are mostly steady. Wool is up due to currency exchange. Jute, acrylic, nylon filament, and polyester staple prices are reported flexible.

Specialty Fabrics and Converting

The end of 1986 saw specialty and converting with prolonged leadtimes due to the high volume of year-end business. However, now that we are a few months into 1987, that back order position has disappeared completely. Demand will be fair, at best, until spring and then a slight increase which should carry out to fall.

Natural fibers' pricing will show a slight increase in these fabrics; whether that rise in manufacturing cost can be passed along proportionately remains to be seen, due to demand and competition.

Nonferrous Metals

Prepared by the N.A.P.M. Nonferrous Metals Committee; chairman, George R. A. Milne, C.P.M., Delta Faucet Company, Indianapolis, Indiana.

Nickel

The price competition between suppliers is fierce! Prices have dropped from about $2.05/lb. to less than $1.95/lb. for plating grade nickel since late December 1986.

Since January 1986, prices have dropped from $2.32/lb. to current levels reflecting soft demand and oversupply. Suppliers predict higher and more stable prices for at least two years. It appears that pricing will remain depressed for the foreseeable future. It looks like producers want to increase price but market conditions continue to depress them.

Russian nickel has been sold in Europe through the LME at extremely low prices since early 1986. This has forced all producers to lower their selling price to move inventory. With current depressed prices, one could predict some closing of facilities.

Aluminum

Prices have increased significantly since the first of the year, domestic capacity is at its highest level (74%) since mid- to late-1985, and for every declaration that the industry will have a positive effect in 1987, another states the reverse; furthermore, if it is positive for industry (producers), is it negative for buyers?

The producer's position seems to be in control. Producer inventories are at their lowest point in the past five to six years; worldwide demand is expected to increase 1% to 1.5% in 1987; domestic consumption and exportation are expected to increase a minimal amount.

It is estimated that ingot will increase 2¢ to 3¢ to bring it to the 66¢ to 67¢/lb. range before the third quarter begins. Obviously, silicon alloys will increase proportionately to the 76¢ to 78¢ range. There will be availability, but deliveries will require more lead time. The price of secondary aluminum will keep pace although it could climb upward, depending upon the availability of scrap. The significant increase in the price of UBCs during the past two months may be an indication of the strength and direction of the scrap market for the short-term and especially so, with its increase in market share as compared to primary. It behooves the buyer to continue to develop reliable sources that will service its customers over the long haul. (Ted Campbell, Morris Bean & Company, Yellow Springs, Ohio)

Tin

After trading as high as $3.25, tin values have settled back to approximately $3.10. The low price will curtail production and the Association of Tin Producing Countries quota of 96,000 M.T. for export should not be exceeded; and China and Brazil are expected to restrain exports to agreed levels. Prices are expected to hold in the $3.00 to $3.50 range with no shortages foreseen. (John E. Russell, ASEA-Kaiser, Springfield, New Jersey)

Magnesium

The auto manufacturers are projecting the increased usage of magnesium by a factor of two over the next five years in automobiles. This is because of improved corrosion resistance developed in the last three to four years (higher purity magnesium alloys). The automotive industry has responded warily to this; however, the aerospace industry is still generally negative about its application there. It may be another two to three years of development of greater corrosion resistance before the aerospace industry finds the material acceptable.

Magnesium is also getting a favorable acceptance in the composite industry (metal matrix composites) but the largest market is still in die casting, aluminum cans, and the desulfurization of steel.

Once the new Norskhydro plant in Canada opens in approximately two years, the supply will exceed projected demand and may push down the pricing of magnesium. However, right now, the pricing will remain stable.

The World Magnesium Conference will be held in May 1987, in Tokyo, Japan. This conference will line up speeches about the present use of magnesium in Japan and cover the trend of magnesium applications in automobiles. (Sharon A. Sinke, C.P.M., Front Inc., Grand Rapids, Michigan)

Brass and Bronze

We have recently seen an upward trend in the price of copper. Comex metal was recently quoted at 63¢/lb. Most major brass rod mills are full to capacity for the second quarter. Many mills are quoting six to eight weeks for delivery. How much of this buying is for real demand and what percentage is hedge buying because of the pending labor contracts is unclear. Apparently, we have not learned a lesson from the 1973-74 era of critical shortages. Hedge buying only contributes to longer deliveries and higher prices.

Recently, we have seen brass scrap increase in price and two fabrication increases. It is doubtful that we will see any real increase in the demand for brass and bronze during 1987. The auto industry is considerably down in sales over 1986, and we don't foresee any drastic change in this market. New home starts are also down compared to last year. During the third quarter of 1987, we will see abundant supply of nonferrous materials. (Edward M. Straka, C.P.M., Baldwin Hardware Corporation, Reading, Pennsylvania)

5/7/87 A6910-1

National Association of Purchasing Management

Report On Business®

May 4, 1987
Volume 5, Number 5

Purchasing Index Increases

Prices Jump

Employment Advances Sharply

Analysis by the Business Survey Committee; chairman, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

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April Report

The economy continued to expand in April say the nation's purchasing managers in their latest **Report on Business.** As in March, the advance was apparent in all indicators except inventories, which declined slightly. The rate of growth in production was moderately higher, continuing at a relatively strong pace. New orders also continued to grow but at a slower rate than March. The trend toward higher employment which began in January continued at an accelerated pace. Inventories declined in April at about the same rate as in March, while vendor deliveries improved. For the eighth consecutive month, more purchasers reported price increases than decreases.

The report was issued today by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee and director of materials management, Pitney Bowes, Inc. Mr. Bretz said, "The economy entered the second quarter with a modest improvement over the healthy growth registered in the first quarter. The mild slowing in the rate of increase in new orders suggests continuing growth in the second quarter."

The **Purchasing Managers' Composite Index** increased slightly to 54.2% from 53.9% in March, the ninth consecutive month the index has registered over 50%. The first four months of 1987 has averaged 54.0% for this leading indicator. Mr. Bretz said, "Past experience indicates that if this average were to continue for the remainder of 1987, it would be consistent with real GNP growth of about 3%." A reading below 50% generally indicates that the economy is in a declining phase, and above 50%, that the economy is generally expanding. The index is based on analysis by the U.S. Department of Commerce. Except for this index, the information in this report is not seasonally adjusted.

Net Difference

In each category measured, this report shows a net difference. It is the difference between the number of responses in the positive direction (higher, better, faster) and the negative direction (lower, worse, slower). Analysis of the month-to-month difference compares the rate of change.

Employment

Employment increased significantly in April. March had shown the first increase after 29 consecutive months of decline. The 22% of members reporting higher employment in April is the most since May 1984 (22%). The net difference between those reporting employment as higher advanced sharply to +10 from +2 in March, and −8 in February. It is the most since July 1984 (+12).

	Higher	Same	Lower	Net Differ.
Employment %				
April	22	66	12	+10
March	16	70	14	+ 2
February	12	68	20	− 8

Buying Policy

Mirroring the continuing increase in production, leadtimes for production materials lengthened for the third consecutive month as the number of purchasers reporting leadtimes of 30 days or less declined to 51% from 55% in March, 57% in February and 59% in January. Leadtimes for maintenance, repair and operating (MRO) supplies were virtually unchanged in April. Leadtimes for capital expenditures were slightly shorter as the number of members reporting leadtimes of six months-and-longer declined to 54% from 56% in March, and 57% in February.

	Hand to Mouth	30 Days	60 Days	90 Days	6 Months and Longer
Production Materials %					
April	16	35	28	14	7
March	18	37	26	13	6
February	17	40	22	15	6
MRO Supplies %					
April	46	42	6	6	0
March	44	43	8	3	2
February	45	40	9	5	1
Capital Expenditures %					
April	11	5	13	17	54
March	13	5	12	14	56
February	13	4	8	18	57

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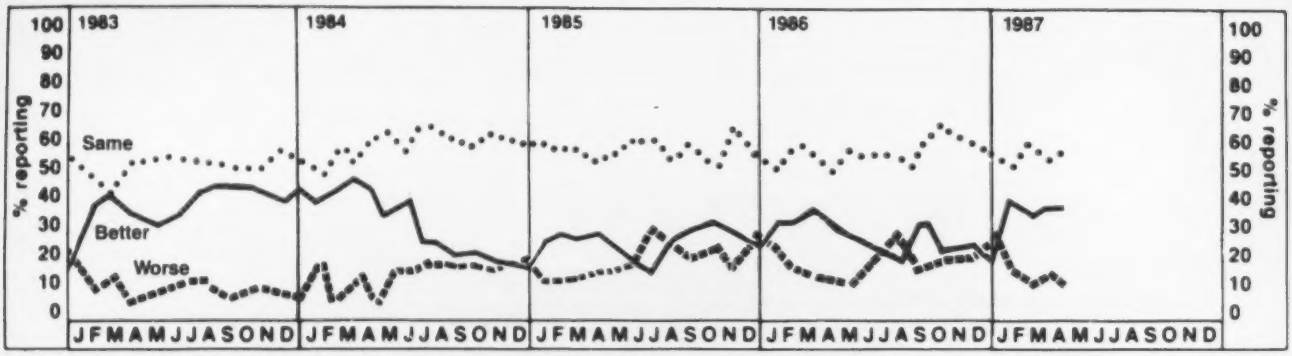
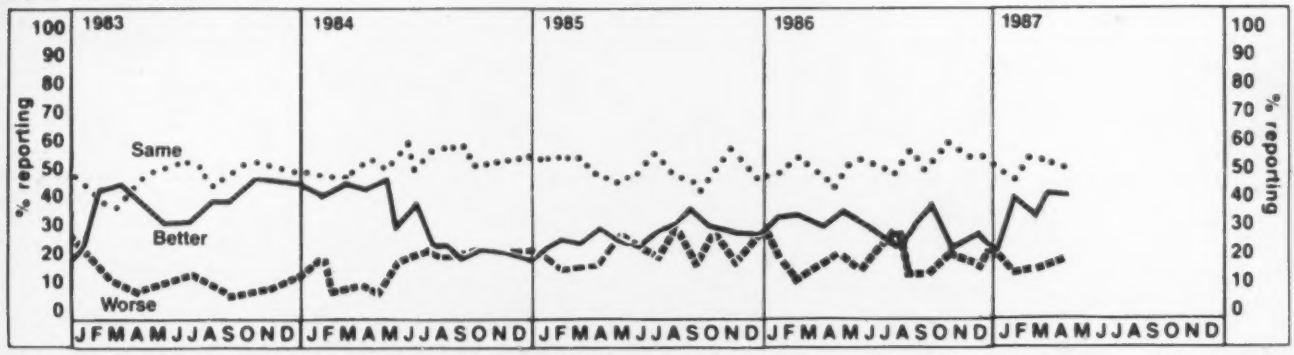
Production



The rate of expansion in production increased in April. The 35% reporting production as better is the highest since March 1986 (also 35%). Perhaps more significant is the increase in the net difference between those reporting production as better (35%) and worse (8%) to +27, the most since April 1984 (+38).

Production %	Better	Same	Worse	Net
April	35	57	8	+27
March	34	55	11	+23
February	31	60	9	+22

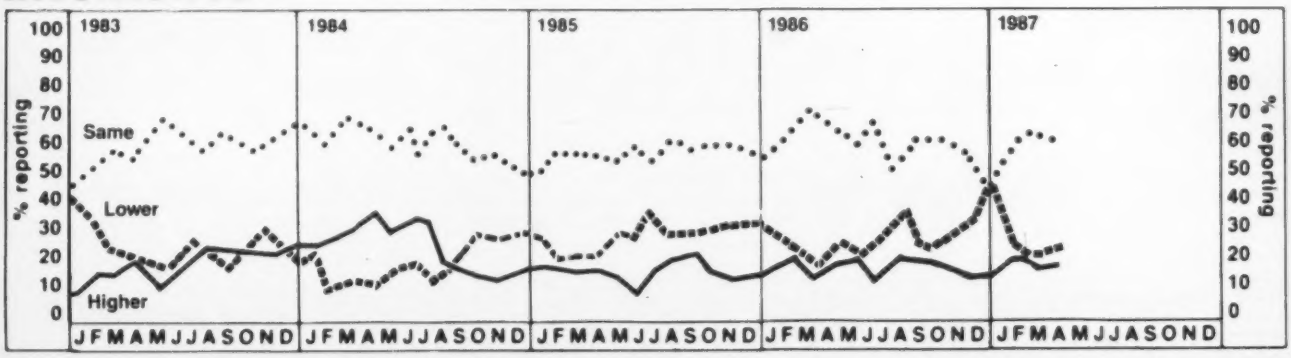
New Orders



New orders continued to expand in April, but at a somewhat slower pace than was registered in March. The 40% reporting new orders as better is off slightly from the 41% in March. The net difference between those indicating new orders better (40%) and worse (12%) declined to +28 from +32 in March but is still strong enough to be the second highest since April 1984 (+40).

New Orders %	Better	Same	Worse	Net
April	40	48	12	+28
March	41	50	9	+32
February	33	51	16	+17

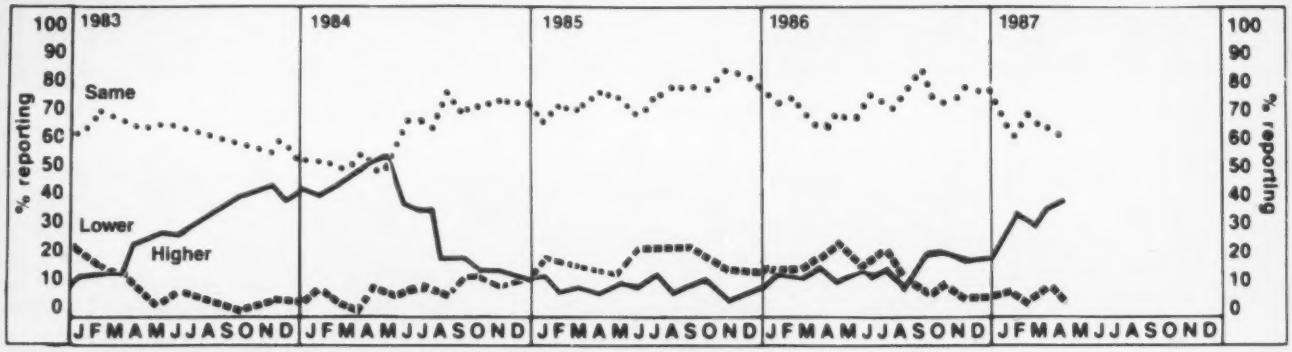
Inventories



April is the second consecutive month purchasers have indicated their inventories have been reduced slightly. Until February, when an equal number of members (19%) reported inventories as higher and lower, inventories had declined for 29 consecutive months.

Inventories %	Higher	Same	Lower	Net
April	17	62	21	− 4
March	16	65	19	− 3
February	19	62	19	0

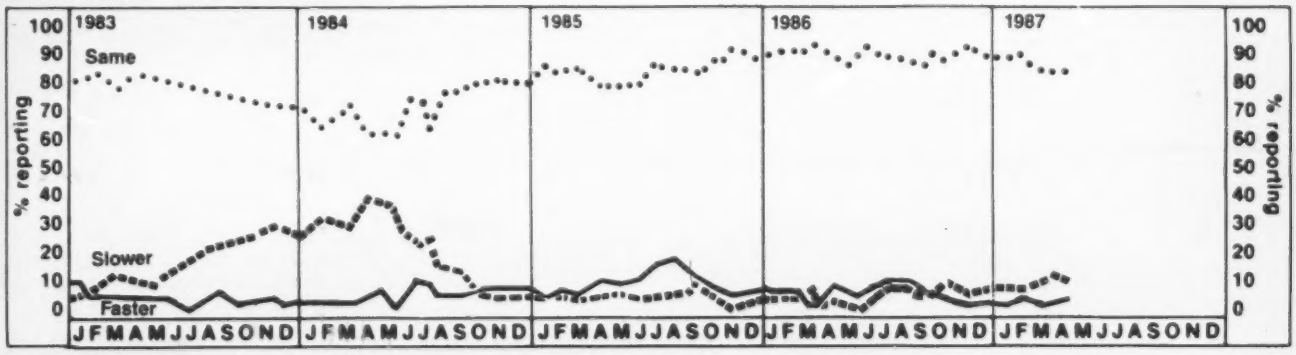
Prices



April marked the eighth consecutive month that more purchasers indicated paying higher rather than lower prices. The 39% reporting higher prices in April is the most since April 1984 (55%). The net difference between those reporting prices as higher (39%) and lower (2%) expanded dramatically to +37 from the +25 to +26 range of the first quarter. This total is also the highest since April 1984 (51%).

Prices %	Higher	Same	Lower	Net
April	39	59	2	+37
March	32	62	6	+26
February	28	69	3	+25

Vendor Deliveries



The speed of vendor deliveries improved in April after slowing in March. Members reporting slower deliveries declined to 11% from March (13%) while those reporting faster increased to 7% from 5%. However, the effects of the recently settled lengthy U.S. Steel strike continue to linger as purchasers report steel in short supply for the second consecutive month.

Vendor Deliveries %	Faster	Same	Slower	Net
April	7	82	11	– 4
March	5	82	13	– 8
February	7	84	9	– 2

Specific Commodity Changes

For the second consecutive month, steel and styrene were reported in short supply. Natural gas and glycerine were reported down in price after two consecutive months in which no significant items were reported lower priced. Numerous chemicals were reported higher in price, particularly plastic resin and plastic and synthetic rubber-producing chemicals. Many were reported higher for the second consecutive month (styrene, benzene, butadiene, plastic resins, phenol and phenon resins and methanol). Numerous metals were also reported higher: brass, bronze, copper (second consecutive month), aluminum (third consecutive month), and steel (the seventh time in the past eight months). Paper products were again reported up in price, led by corrugated shipping containers (the twelfth time in the past thirteen months), printing paper (fifth consecutive month) and caustic soda, a chemical used heavily in making paper for printing and corrugated cartons, as well as in petroleum refining (second consecutive month and the fifth time in the past eight months). Fuel oil was reported higher priced, the third time in the past four months.

UP in Price: Corrugated shipping containers, printing paper, caustic soda (used heavily in petroleum refining and paper making), aluminum, copper, brass, bronze, steel, fuel oil, phenol and phenolic resins (used in making plastic products for housing and auto products), benzene (used as a chemical solvent and in gasoline), butadiene and styrene (both used chiefly in making synthetic rubber, resins and plastics), latex (used in synthetic rubber products), plastic resins, acrylic acid and acrylate (used in making synthetic rubber and plastics), methanol (used heavily as a solvent and in synthesizing other chemicals), and many miscellaneous chemicals.

DOWN in Price: Natural gas and glycerine (used chiefly as a solvent, plasticizer and sweetener).

In SHORT Supply: Steel and styrene.

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Economists have devised a variety of formulas to compensate data for seasonal variations. N.A.P.M. cooperates with the U.S. Department of Commerce, which prepares the monthly Purchasing Managers' Composite Index for publication by N.A.P.M. The Department of Commerce adjusts the five above-mentioned components of the *Report on Business*, applies various weights to each and combines them into a single index number. The Composite Index is based on analysis by the U.S. Department of Commerce, and is the only part of the report adjusted for seasonal variations.

Note: The next issue of the *Report on Business* will be available June 1, 1987.

Commodity Reports

Paper Products

Prepared by the N.A.P.M. Paper Committee; chairman, Glenn Farber, C.P.M., Vanier Graphics Corporation, Santee, CA.

The mood at the recent A.P.I. Paper Week was jubilation, reflecting a record year in 1986. Slightly over 71 million tons of paper and paperboard were produced, an increase of 5.9% above 1985. The industry spent over $9 billion in capital expenditures. Labor costs have been stabilized with only minimal increases. Most mills were able to gain several increases in pulp prices along with price increases on many of their paper products. The decline of the dollar overseas made imports more difficult and also prompted increases in exports on certain grades. Fourth quarter after-tax profits of top-30 paper companies averaged a gain of 36% over 1985, but several problem areas have already emerged: declines in some stronger grades and weakening of prices.

Newsprint

Newsprint supplies have tightened rapidly. A major earthquake in New Zealand caused considerable damage at a mill rated at 300,000 TPY. Labor contracts in eastern Canada expiring April 30th and the announced targeting of the largest newsprint mill in the world have prompted some inventory buildup. Discounts are still prevalent, but are mostly holdovers from previous commitments. Newsprint had a 3.7% gain in 1986 and operated at about 96% of capacity. The best estimate at this time is an operating rate approaching 98%. The last announced increase was October 1st, and there is some feeling that there could be another price increase in the third or fourth quarter of 1987.

Uncoated Groundwood

This market is firm to tight on the bottom end products (MF grades), softening as it moves towards SC "A" products. The domestic supply of SC "A" is firm with some mills approaching an oversold condition in the fall. High brightness groundwoods are becoming more prevalent. Expectations are that this market will tighten as the major catalog season approaches. Some new capacity is scheduled for late 1987. Deliveries are running four to six weeks and inventories are stable. The pricing of this grade is in a state of confusion. Some of the bottom-end grades increased in January, while the top-end grades decreased in March.

Coated Groundwood

Coated groundwood is readily available and excess capacity prevails. International started up a 200,000 TPY machine in late December adding further pressure. Deliveries are readily available. More tonnage will become available as the four machines started up in 1986 reach full output. Inventories are decreasing; discounting is increasing. Expectations are that grade 5 LWC will continue dragging down the prices of the higher grades.

Uncoated Free Sheet

The uncoated freesheet grades still remain the shining star of the paper industry. They gained a composite 7.7% growth over 1985, including a 7.5% increase of mill inventories at yearend. There was a corresponding 4.2% increase in industry capacity. Capacity additions in late 1986 halted a price increase on January 1 and touched off further rounds of discounting in some of the grades within this classification. We should see another 4.2% increase in capacity in 1987; however, very little additional capacity is planned for 1988 and 1989. Possible labor problems in the Pacific Northwest could affect this grade. However, there should be adequate capacity to overcome any problem. The near-term projection is that prices will stay at current levels, perhaps with minor additional discounting; and inventories will decrease, with no price firming expected until the fall.

Coated Free Sheet

This grade is running similarly to the uncoated free sheet although not as extreme. There is availability and some selective discounting. The market is likely to stay soft until demand catches up with capacity. Inventories are holding level or decreasing slightly, with most grades readily available. Coated papers did make a good recovery in 1986 from the very depressed 1985, with an increase of approximately 5.6%. However, imports of coated papers are still running very high, putting added pressure on domestic manufacturers.

Bleached Bristols

Bleached bristols had growth of about 7% in 1986. Availability appears adequate and no problems are anticipated for the next six months. Inventories remain level with no changes anticipated. Selective increases may occur in some of the grades. There could be another increase later in the year, especially if the export market continues strong.

Paperboard/Linerboard

This is the other shining star of the relatively low-cost grades posting a 7.5% increase in 1986 over 1985, mostly due to very strong demand for linerboard and corrugating medium, in turn prompted by an increasing demand for corrugated boxes, resulting from an almost 14% increase in exports. Increases in linerboard prices prompted a healthy increase in container prices. In the paperboard end, SBS backlogs have strengthened but are still weaker than last fall. SUS and recycled boards are readily available in three to four weeks. Projection for the short-term is that availability will remain the same. Some price increases for SBS were announced for April. SUS and recycled likely will have no change in the near future. The linerboard increase to $380 may not be fully implemented until later in the year.

Pulp

Pulp has had its 5th consecutive quarterly increase which probably will be the last for this year. Demand for pulp overseas will put more pressure on the non-integrated domestic mills. Pulp production in 1986 rose slightly less than 6%. However, market pulp increased by 11%, driven by a strong demand for exports.

Packaging and Containers

Prepared by the N.A.P.M. Packaging and Containers Committee; chairman, Carl D. Dirkse, C.P.M., S.C. Johnson & Son, Inc., Racine, WI.

The packaging and containers market continues to strengthen. Demand for paperboard is very strong due to domestic needs and export sales resulting from the weak dollar. As a result, corrugated prices continue to escalate. Dramatic increases in pulp pricing have taken place in the last six months. The inventory surplus that existed in early 1986 was depleted in the fourth quarter. As demand for paper and paperboard remains strong, further increases are anticipated late this year. Plastic resin and packaging are also strong. Mergers and acquisitions continue throughout the industry.

Metal Cans

The USX strike is settled. The strike had minimal impact on can users. Can availability is good and prices are stable. Ownership of some can companies is still being negotiated.

Fibre Cans

Supply is still adequate-to-surplus. Some price increases are being experienced due to paperboard increases. The biggest news is the merger of Boise and Sunoco.

Glass

Glass supply is adequate but may get tighter as we get into warmer weather. Pricing is stable with one member reporting an increase. Price increases are being proposed.

Molded Plastics

Resins continue to tighten, causing some price increases. Polystyrene is in short supply. Barrier packaging enables plastic to erode some of the traditional glass container markets, including liquor. All signs point to increasing use of plastic throughout the packaging field.

Films

The supply side is very good; availability is adequate-to-surplus. However, some price increases have been announced due to increasing resin prices.

Laminated Stock

Again, availability is adequate but there is some strengthening in prices due to raw material increases.

Metal Drums

This continues to be a buyer's market. Supplies are adequate-to-surplus, and prices are stable with one member reporting a decrease.

Fibre Drums

Supply is adequate-to-surplus. However, prices are increasing due to paperboard increases and relatively few suppliers. Plastic drums are slowly replacing composite drums for shipment of hazardous liquid chemicals.

Folding Cartons

Supply is still adequate-to-surplus, but prices are increasing due to paperboard increases. Paperboard is finding increasing use in the aseptic packaging area.

Corrugated

Linerboard has stabilized at $350/ton. As a result, the majority of our members report increases in their corrugated. Export demand continues strong due to the weak dollar. If this continues, the mills may attempt another price increase in 1987. There is speculation about further corrugated increases. There are spot shortages of linerboard, but overall inventories are adequate due to the fact that some paper machines can be converted to making linerboard.

Bags

Supplies are adequate, but price increases are being experienced and anticipated due to increases in the price of paper and resins.

7/30/87 A6910-1

National Association of Purchasing Management

Report On Business®

June 1, 1987
Volume 5, Number 6

Purchasing Index Rises Dramatically

Production & New Orders Up

Prices Continue Upward Trend

Analysis by the Business Survey Committee; chairman, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

The *Report on Business* is published monthly by the National Association of Purchasing Management, based on data compiled from replies to questions asked of purchasing managers in some 250 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification category, based on each industry's contribution to national income.

May Report

The economy continued its growth in May, say the nation's purchasing managers in their latest **Report on Business.** As in March and April, all indicators were up except for inventories, which were stable. The rate of growth in production was only slightly lower than in April. New orders continued to increase, although at a somewhat slower pace. The speed of vendor deliveries slowed considerably, reflecting the growth of production as well as the gradual return of U.S. Steel to production after a lengthy strike. For the third consecutive month, employment continued to grow. More purchasers reported price increases than decreases for the ninth consecutive month. However, for the first time in four months, the rate of growth in price increases slowed.

The report was issued today by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of materials management, Pitney Bowes, Inc. Mr. Bretz said, "The economy showed healthy growth in May, even without the aid of inventory growth (all indicators point in a positive direction). The growth in new orders virtually assures both a good second quarter and first half of 1987."

The **Purchasing Managers' Composite Index** expanded significantly to 57.5% from 54.2% in April, the tenth consecutive month this leading indicator has registered over 50%. This is the highest total since June 1984 (58.1%). The first five months of 1987 has averaged 54.7%. Mr. Bretz said, "Based on past experience, this could be consistent with real GNP growth of about 3.2% (if this average were to continue for the remainder of 1987)." A reading above 50% generally indicates that the economy is in an expanding phase; below 50%, that the economy is generally declinding. The index is based on analysis by the U.S. Department of Commerce. Except for this index, the information in this report is not seasonally adjusted.

Net Difference

In each category measured, this report shows a net difference. It is the difference between the number of responses in the positive direction (higher, better, faster) and the negative direction (lower, worse, slower). Analysis of the month-to-month difference compares the rate of change.

Employment

Employment increased in May for the third consecutive month. Prior to March, purchasers reported no growth in employment for 29 consecutive months. This third consecutive rise in employment is significant, even though the rate of growth is off somewhat from April. It mirrors the continued improvement in production and new orders.

	Higher	Same	Lower	Net Differ.
Employment %				
May	17	72	11	+ 6
April	22	66	12	+10
March	16	70	14	+ 2

Buying Policy

Leadtimes for production materials expanded in May for the fourth consecutive month, reflecting the continued increase in production. The number of members reporting leadtimes of 90-days-or-longer increased to 25% from 21% in April and 19% in March. Leadtimes for maintenance, repair and operating (MRO) supplies decreased as 85% of purchasers indicated leadtimes of 30-days-or-less, down from 88% in April. Leadtimes for capital expenditures declined somewhat for the third consecutive month as the number of purchasers reporting leadtimes of 6-months-and-longer dropped to 52% from 54% in April and 56% in March.

	Hand to Mouth	30 Days	60 Days	90 Days	6 Months and Longer
Production Materials %					
May	16	36	23	18	7
April	16	35	28	14	7
March	18	37	26	13	6
MRO Supplies %					
May	40	45	8	4	3
April	46	42	6	6	0
March	44	43	8	3	2
Capital Expenditures %					
May	13	7	11	17	52
April	11	5	13	17	54
March	13	5	12	14	56

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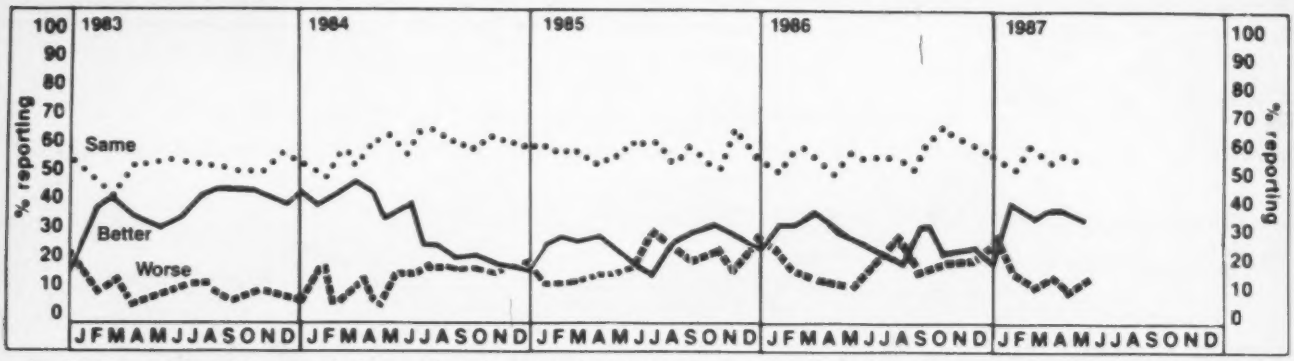
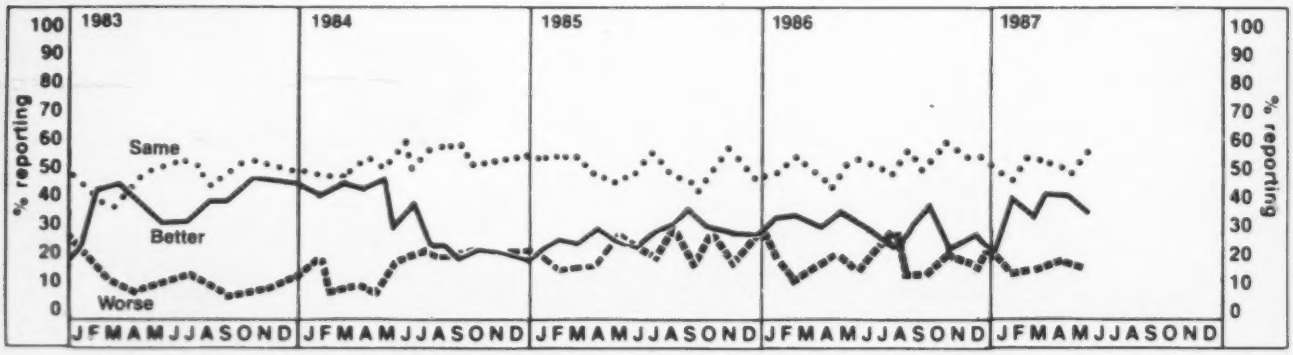
Production



Production continued to grow in May, although not at April's brisk pace. Nevertheless, by a margin of 3 to 1, more purchasers said their production was better (33%) than worse (11%).

Production %	Better	Same	Worse	Net
May	33	56	11	+22
April	35	57	8	+27
March	34	55	11	+23

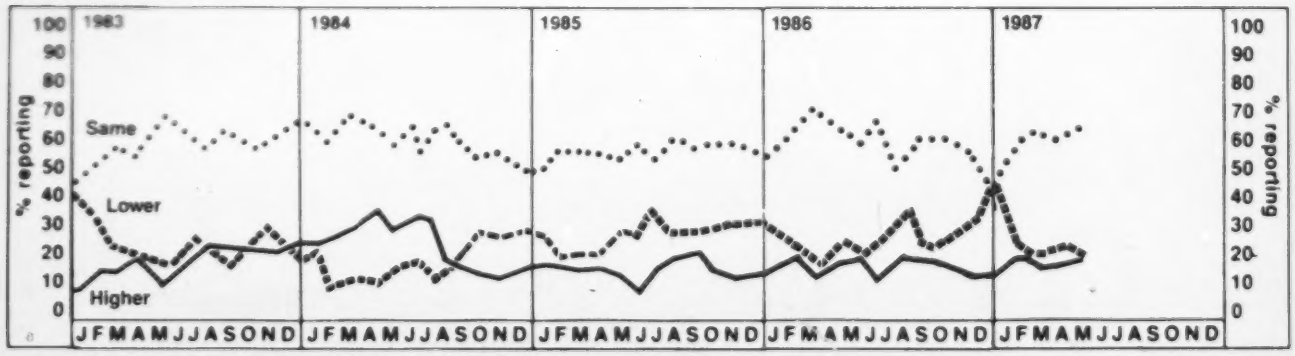
New Orders



New orders increased in May for the fifth consecutive month. Even though the rate of growth was not as vigorous as in April, it is strong enough to indicate healthy production in June and a good second quarter finish.

New Orders %	Better	Same	Worse	Net
May	34	55	11	+23
April	40	48	12	+28
March	41	50	9	+32

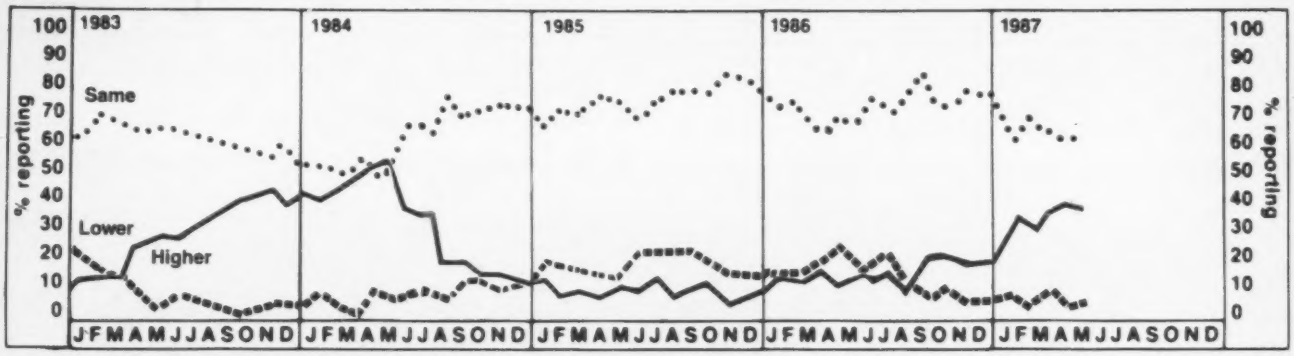
Inventories



After two consecutive months in which inventories have declined slightly, an equal number of purchasers (18%) indicated their inventories neither declined nor grew. This condition is similar to that of February, when an equal number of members (19%) said their inventories were neither higher or lower. Thus, the growth in production was not helped by a buildup of inventories.

Inventories %	Higher	Same	Lower	Net
May	18	64	18	0
April	17	62	21	− 4
March	16	65	19	− 3

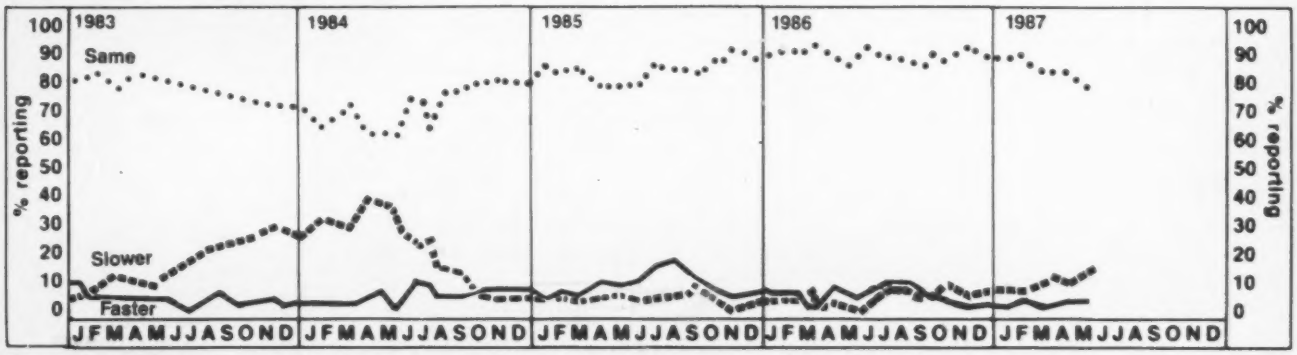
Prices



For the eighth consecutive month, more purchasers said they paid more rather than less for their purchases. Many members indicated that their higher prices were directly related to the lower value of the dollar, which caused their imports to increase in price, as well as the pressure from higher oil prices to increase petroleum-derived chemicals and plastic resins.

Prices %	Higher	Same	Lower	Net
May	38	59	3	+33
April	39	59	2	+37
March	32	62	6	+26

Vendor Deliveries



The speed of vendor deliveries slowed in May for the eighth consecutive month. The 16% reporting slower deliveries is the most since July 1984 (28%). While the lingering effects of the lengthy U.S. Steel stike has had an impact on vendor performance, the significance of the slowing in vendors' deliveries cannot be overlooked as a reflection of continued growth in production and new orders.

Vendor Deliveries %	Faster	Same	Slower	Net
May	7	77	16	– 9
April	7	82	11	– 4
March	5	82	13	– 8

Specific Commodity Changes

For the third consecutive month, steel and styrene were reported in short supply. The only item reported lower in price was natural gas (second consecutive month). Paper products were again reported higher in price with corrugated shipping containers up for the thirteenth time in the last fourteen months, and printing paper for the sixth consecutive month. Numerous metals were also up in price; steel (eighth time in the past nine months), aluminum (fourth consecutive month), copper (third consecutive month), and a precious metal, silver. A significant number of petroleum-derived chemicals were reported higher priced, particularly plastic-related chemicals. Up in price for the third consecutive month were styrene (and polystyrene), benzene, plastic resins, phenol and phenolic resins; caustic soda, a chemical used heavily in making paper for printing and corrugated cartons, was higher priced for the sixth time in the last nine months. Fuel oil was up in price (for the fourth time in the past five months), as was diesel fuel. Vegetable oils were reported higher priced for the second time in the last three months.

UP in Price: Corrugated shipping containers, printing paper, caustic soda (used heavily in petroleum refining and paper-making), aluminum, copper, steel (particularly hot and cold rolled sheets and steel plates), silver, fuel oil, diesel fuel, phenol and phenolic resins (used in making plastic products for housing and auto products), benzene (used as a chemical solvent and in gasoline), styrene and polystyrene (used chiefly in making synthetic rubber, resins and plastics), latex (used in synthetic rubber products), plastic resins and materials, polyethylene (used in making plastic products), polyproplene (thermoplastic plastics or fibers), many petroleum-derived chemicals, and vegetable oils (used in prepared foods).

DOWN in Price: Natural gas.

In SHORT Supply: Steel (particularly hot and cold rolled sheets), styrene and polystyrene.

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Commodity Reports

Steel

Prepared by the N.A.P.M. Steel Committee; chairman, Daniel R. Krause, C.P.M., The Budd Company, Troy, MI.

The domestic steel industry appears to be stronger than it has been for a long time: most steelmakers are expected to report first-quarter 1987 profits, compared with year-earlier losses. Prices generally are up and, although they may weaken in the second half, they will probably finish the year at higher levels than at the end of 1986. Presently, prices are firm as buyers move to rebuild supplies depleted by the USX strike. This demand, however, is not likely to continue beyond the second quarter.

The N.A.P.M. steel survey for April reflects this current inventory build-up, with 50% of the respondents reporting steel inventories up 10% since the first of the year, 37% reporting inventory at the same level, and only 13% reporting a decrease. What's more interesting is that 50% of the respondents expect to decrease steel inventories over the next six months, 50% expect to maintain them, and none are planning to increase them. Moreover, most respondents expect no significant change in their own level of operations over the next three months.

Of significance too, is that leadtimes are lengthening and some tight supplies are developing. Within the next six months, steel buyers are anticipating shortages of coated sheets, hot rolled and cold rolled sheets, structural steel and plate.

Even though the steel industry seems to have gained ground, its future direction will depend on how the major steelmakers respond to market factors; this could include a reduced demand that if not managed properly may quickly send producers back into a tailspin.

Energy

Prepared by the N.A.P.M. Energy Committee; chairman, Howard T. Perley, C.P.M., International Paper Company, Memphis, TN.

Petroleum Products

Fuel oil prices increased early in the second quarter due to OPEC's adherence to production quotas and a weak dollar. Meanwhile, unseasonably cold weather, refinery turn-arounds, and a strong European market contributed to reduced residual and heating oil supplies. Although demand should decline with warmer weather, no significant price reductions are expected unless crude oil prices drop below $17 per barrel.

Natural Gas

Over the past three years, buyers able to purchase spot market gas have made big savings compared to the tariff prices charged by local utilities. However, spot prices have not stabilized. Moreover, significant reductions in utility prices occurred this spring, and more are likely. Many utilities are also increasing their standby charges for the privilege of resuming service if spot supplies are interrupted during the winter. Therefore, the price gap has started to narrow, and within two or three years may be minimal. (I. G. Mackenzie, C.P.M., Corning Glass Works, Corning, NY)

Coal

The coal industry continues to struggle with over-capacity, slow growth in the domestic market and a stagnant export market. A build-up of utility stocks to hedge against a potential strike in January 1988 has not yet occurred and is unlikely until much later in the year, if at all. Buyers should continue to purchase at low spot market prices, or contract at prices that are fixed for only one year or less. Buyers should also continue to study ways to negotiate lower transportation rates. Enactment of acid rain legislation appears to be unlikely this year. (W. T. Robertson, Jr., C.P.M., Duke Power Company, Charlotte, NC)

Electricity

Although generating capacity is more than adequate, utilities with summer peak loads may request cutbacks or curtail their interruptible customers on very hot days. Buyers should therefore be aware of their utility's reserve margin and the probability of mid-summer interruptions. Users — particularly cogenerators — should follow up on utility proposals to the Federal Energy Regulatory Commission which permit utilities to invite bids from private and other utility-owned cogenerators to supply their projected needs for additional power. In return, the utilities would provide transmission services to cogenerators seeking other potential utility buyers.

7/13/87 A6910-1

National Association of Purchasing Management

Report On Business®

July 6, 1987
Volume 5, Number 7

Economy Continues Steady Growth

Prices Up For Ninth Month

Production & New Orders Increase

Analysis by the Business Survey Committee; chairman, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

The *Report on Business* is published monthly by the National Association of Purchasing Management, based on data compiled from replies to questions asked of purchasing managers in some 250 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification category, based on each industry's contribution to national income.

June Report

The economy continued to expand in June, say the nation's purchasing managers in their latest **Report on Business.** Production remained strong and new orders expanded, although the rate of growth for both was less than in May. The speed of vendor deliveries once again slowed, mirroring the steady growth in production and the continuing shortages of steel, a fallout from the six-month-long U.S. Steel strike. Inventories were reported slightly higher, possibly spurred by a build-up in order to avoid growing shortages in steel, polystyrene, plastic resins and caustic soda. Employment continued to increase for the fourth consecutive month. For the tenth consecutive month, more purchasers reported price increases than decreases, reflecting the impact of higher prices for petroleum, petroleum-derived chemicals and imports.

The report was issued today by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of materials management, Pitney Bowes, Inc. Mr. Bretz said, "As expected, the second quarter ended with favorable growth. Although June's growth may have been aided by some inventory building where certain commodities were in short supply, the expansion of all indicators is most impressive. Additionally, the continued increase in new orders suggests a healthy beginning for the second half of 1987."

The **Purchasing Managers' Composite Index** registered 57.3% in June, a fractional decrease from 57.5% in May. This is the eleventh consecutive month in which this leading indicator has exceeded 50%. The first two quarters of 1987 have averaged 55.1%. "Based on past experience," Mr. Bretz said, "if this average were to continue for the last two quarters of 1987, it would be consistent with real GNP growth of about 3.4%." A reading above 50% indicates that the economy is generally in an expanding phase; below 50%, that the economy is generally declining. The index is based on analysis by the U.S. Department of Commerce. Except for this index, the information in this report is not seasonally adjusted.

Net Difference

In each category measured, this report shows a net difference. It is the difference between the number of responses in the positive direction (higher, better, faster) and the negative direction (lower, worse, slower). Analysis of the month-to-month difference compares the rate of change.

Employment

Employment increased in June for the fourth consecutive month, after registering a string of 29 consecutive months of decline. Nevertheless, many members indicated caution in increasing employment too quickly, preferring to utilize overtime and employ temporary help to bridge recent peaks in production.

Employment %	Higher	Same	Lower	Net Differ.
June	18	70	12	+ 6
May	17	72	11	+ 6
April	22	66	12	+10

Buying Policy

After expanding for four consecutive months, members reported shrinking their leadtimes for production materials in June. The number of members reporting leadtimes of 90 days or longer decreased to 19% from 25% in May. However, leadtimes for capital expenditures lengthened after three consecutive months of decrease. The number of members reporting leadtimes in the significant six-months-and-longer time frame increased to 56% in June from 52% in May. For the first time in many months, a number of members indicated they were planning to expand their planned capital expenditures for 1987. Leadtimes for maintenance, repair and operating (MRO) supplies were virtually unchanged in June.

Production Materials %	Hand to Mouth	30 Days	60 Days	90 Days	6 Months and Longer
June	15	43	23	11	8
May	16	36	23	18	7
April	16	35	28	14	7
MRO Supplies %					
June	40	44	9	5	2
May	40	45	8	4	3
April	46	42	6	6	0
Capital Expenditures %					
June	9	9	10	16	56
May	13	7	11	17	52
April	11	5	13	17	54

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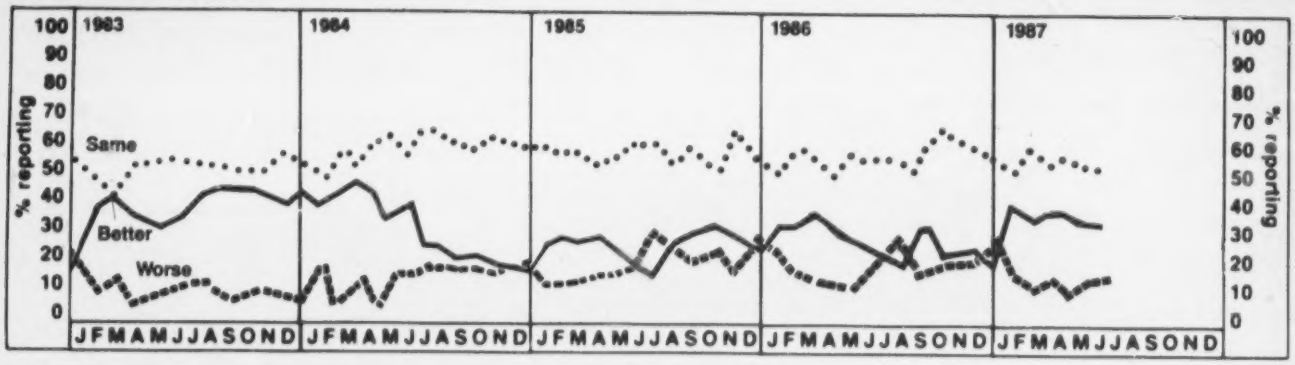
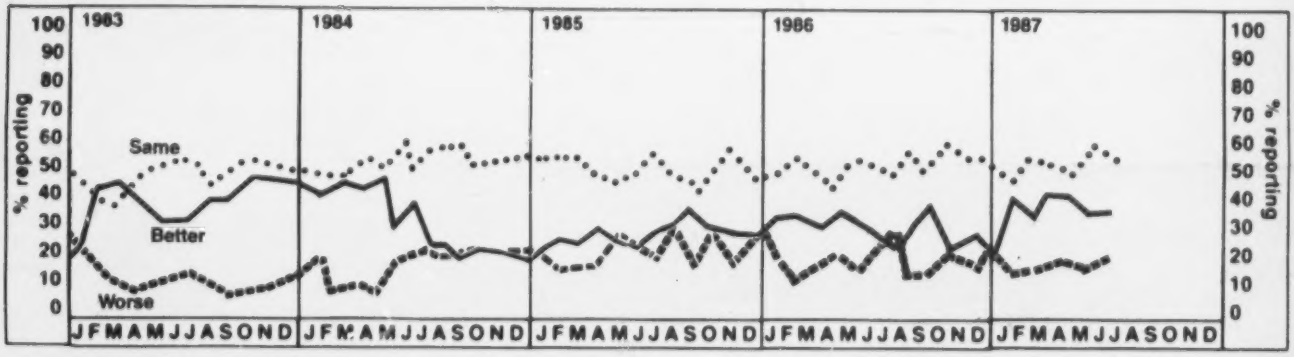
Production



Production continued to expand in June, for the sixth consecutive month. Even though the rate of growth was not as vigorous as in May and April, the ratio of those reporting better production (32%) over worse (13%) is a respectable 2½ to 1.

Production %	Better	Same	Worse	Net
June	32	55	13	+19
May	33	56	11	+22
April	35	57	8	+27

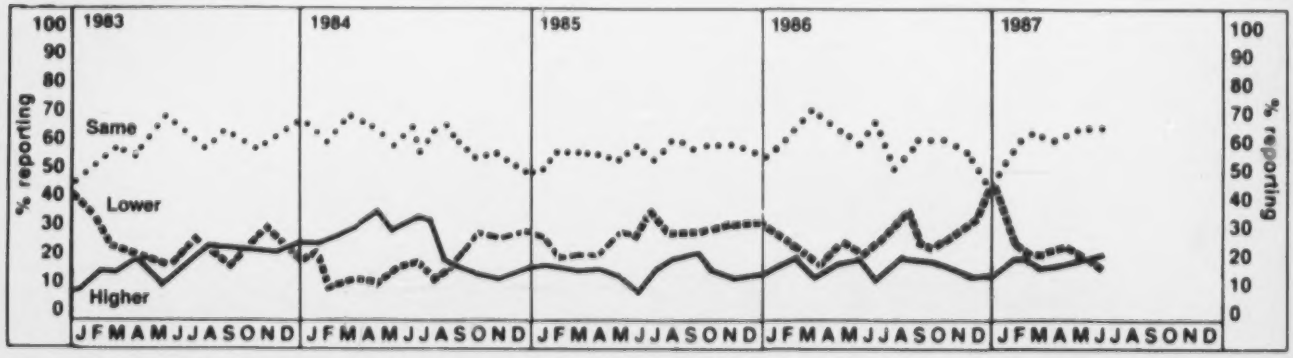
New Orders



New orders grew in June for the sixth consecutive month. Although the pace of growth was not as brisk as in the previous two months, it is sufficient to project a healthy beginning for the third quarter of 1987.

New Orders %	Better	Same	Worse	Net
June	35	50	15	+20
May	34	55	11	+23
April	40	48	12	+28

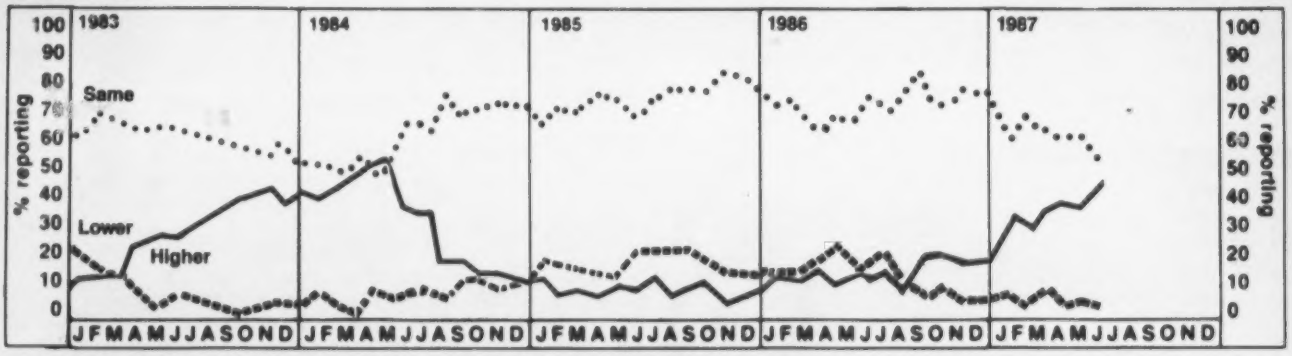
Inventories



Inventories grew slightly in June after marking time in May. A number of purchasers reported increasing their inventories somewhat for items in short supply in order to reduce the effects of slower deliveries for those commodities.

Inventories %	Higher	Same	Lower	Net
June	19	64	17	+ 2
May	18	64	18	0
April	17	62	21	- 4

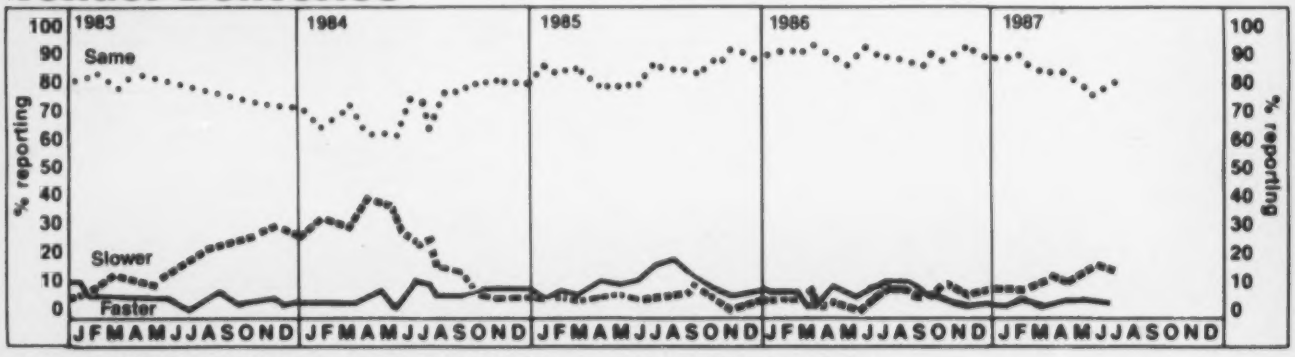
Prices



June marks the ninth consecutive month that more purchasers reported paying higher prices (48%) compared to lower (2%). While this is a reflection of a growing economy, it is also of growing concern to purchasers. The two primary reasons noted for many of the price increases were: the rising cost of imports brought about by the relatively low value of the dollar, and the significant price increases of petroleum-derived chemicals and plastic resins, resulting from rapidly rising oil prices.

Prices %	Higher	Same	Lower	Net
June	48	50	2	+46
May	38	59	3	+35
April	39	59	2	+37

Vendor Deliveries



The speed of vendor deliveries slowed again in June, the eighth consecutive month this has occured. Many members indicated the continuing shortages of steel products as a reason for slow deliveries. Others cited the shortages of polystyrene, other plastic resins, and caustic soda as contributing to delays in deliveries.

Vendor Deliveries %	Faster	Same	Slower	Net
June	5	80	15	−10
May	7	77	16	− 9
April	7	82	11	− 4

Specific Commodity Changes

The only item reported down in price was natural gas (third consecutive month). Steel was reported in short supply for the fourth consecutive month. Polystyrene was also reported in short supply (second consecutive month) as were plastic resins and caustic soda. Numerous items were reported up in price, particularly metals, petroleum-derived chemicals and resins, plastic and paper-related products. Corrugated shipping containers were reported up in price for the fourteenth time in the past fifteen months. Metals reported higher included steel (the ninth time in the last ten months), aluminum (fifth consecutive month), copper (fourth consecutive month, silver (second consecutive month), lead and zinc. Petroleum-derived chemicals and plastic-related commodities up in price were benzene (sixth consecutive month), vinyl acetate, acrylic acid, aromatic solvents, phenol (fourth consecutive month), styrene (fourth consecutive month), polystyrene (second consecutive month), polypropylene (second consecutive month), polyethylene, and plastic resins and products. Fuel oil increased in price for the fifth time in the past six months. Caustic soda was reported up in price for the seventh time in the past ten months. Newcomers to the list of higher-in-price items were chlorine, soda ash (a close relative of caustic soda) and carbon black.

UP in Price: Corrugated shipping containers, chlorine (used heavily in making bleached paper and paper board), caustic soda and soda ash (used heavily in petroleum refining and paper-making), aluminum, copper, steel (particularly steel plate and tubing), zinc, lead, silver, fuel oil, phenol (used in making plastic products), benzene (used as a chemical solvent and in gasoline), vinyl acetate (used in making vinyl coatings and products), styrene and polystyrene (used chiefly in making synthetic rubber, resins and plastics), plastic resins, materials and products, polyethylene (used in making plastic products), polypropylene (thermoplastic plastics or fibers), acrylic acid (used heavily in making varnishes and lacquers), aromatic solvents, miscellaneous chemicals, and carbon black (used heavily in making tires and industrial rubber products).

DOWN in Price: Natural gas.

In SHORT Supply: Steel (particularly galvanized, coated, cold-rolled sheets, stainless pipe and tubing), polystyrene, plastic resins and caustic soda.

The National Association of Purchasing Management's *Report on Business* records the actual changes and rates of change in five important categories of data: production, new orders, employment, inventories and vendor deliveries. These five components, as reported, are not adjusted to compensate for seasonal variations.

Economists have devised a variety of formulas to compensate data for seasonal variations. N.A.P.M. cooperates with the U.S. Department of Commerce, which prepares the monthly Purchasing Managers' Composite Index for publication by N.A.P.M. The Department of Commerce adjusts the five above-mentioned components of the *Report on Business*, applies various weights to each and combines them into a single index number. The Composite Index is based on analysis by the U.S. Department of Commerce, and is the only part of the report adjusted for seasonal variations.

Note: The next issue of the *Report on Business* will be available Aug. 3, 1987.

Commodity Reports

Wood Products

Prepared by the N.A.P.M. Wood Products Committee; chairman, S.G. Craven, Pope & Talbot, Inc., Portland, OR.

Due to a mild winter and low interest rates, most phases of the wood products industry have held strong for the past six months. The next six months should show a continued increase in activity in most areas, barring a significant rise in interest rates, which have already inched higher of late. However, most financial houses are predicting an easing of rates by the end of the year.

Prices should be steady-to-higher for most building materials. Supplies will be similar to the past six months, with some specialty items scarce and therefore higher-priced.

Availability of construction products, i.e., fir, hemlock, pine and plywood, should be good, with prices remaining steady. Plants could raise production another 5% which would effect the market; however, summer vacations typically influence some of this production. Therefore, look for continued availability with only a slight chance of price increases in these materials.

In the hardwood, veneer and furniture markets, availability and prices should remain steady with a few exceptions; both red oak and mahogany have been in short supply and therefore prices continue to rise.

The Canadian lumber tariff seems to have had little impact on the amount of lumber coming out of Canada. However, it is widely held that the tariff is being absorbed by the manufacturers (causing a slight increase in prices for U.S. buyers), which may spur the Canadians to pursue some foreign markets typically serviced by U.S. mills.

Nonferrous Metals

Prepared by the N.A.P.M. Nonferrous Metals Committee; chairman, George R.A. Milne, C.P.M., Delta Faucet Company, Indianapolis, IN

Copper

As anticipated, Comex copper prices rose approximately 5% during the first quarter of 1987, then stabilized through April. During the first three weeks of May, the market advanced another $.05 per pound near those year highs of $.69 per pound. This abrupt increase was the result of:

- Renewed speculative interest and spillover from dynamic gold and silver markets.
- A solid 5-6% consumption-volume increase led by brass and wiremills, assisted by the declining U.S. dollar.
- Sporadic production losses due to accidents, transportation difficulties, disruptions, and deferments, which have reduced consumer inventories over 15% and Comex stocks by 25%, with producer and merchant stocks sharply reduced.

The current supply/demand tightness is expected to continue through the second quarter, but should begin to loosen during the summer months due to the slowdown in industrial activity. Forecasted copper consumption growth of 1.5-2.0% should hold during the second half of 1987, but anticipated production increases scheduled for this period should restore a positive balance. As a consequence, expect copper tightness and prices to peak at the end of this quarter, with inventories gradually being restored and prices moderately receding during the second half. (Frederick C. Burke, Rea Magnet Wire Company, Fort Wayne, IN)

Zinc

Thus far, 1987 zinc prices have not sagged to the $.30 per pound low of 1986, but market conditions have developed which could boost prices toward the $.47 per pound levels of last fall. Following settlement of the Noranda labor strike, first quarter 1987 zinc prices fell to the $.38 to $.40 per pound level; however, sluggish demand from all but the galvanizing sector, and continuing production problems prevented producers from building inventories. Consequently, second quarter labor disputes again helped drive prices up, to $.44 per pound for May.

The June 1 announcement that USW members at Cominco rejected a tentative labor agreement and various planned maintenance shutdowns this summer are the major factors supporting tight (but not short) market conditions and higher prices nearby. Less significant factors, but worthy of consideration, are the impact of the pending labor contract expiration at Noranda's New Brunswick zinc-lead mine, and the fluctuating U.S. dollar. (Victoria P. Radick, National Steel Corporation, Pittsburgh, PA)

Cadmium

The cadmium metal market, which had been underpriced for some time, has again become very bullish. Prices have increased from the low-to-mid 80 with producer levels currently at $1.40 to $2.00 a pound, and very little available. Production problems at some zinc mines, of which cadmium is a by-product, and a strike at another mine are contributing to the current shortage and increase in prices. This shortage of metal is also exacerbated by larger-than-expected purchases of cadmium by some east European nations and by Japan, for use in their growing battery industry.

It is uncertain as to how long the current price levels will hold — historically the summer slowdown has an effect on demand and price; however, the present shortage may be longer-lasting. Therefore, the market will bear close watching over the next months. (Wilfred P. Brandes, Kraft Chemical Company, Melrose Park, IL)

Lead

The price of lead has risen vigorously, moving from $.26 per pound on April 9th to $.37 per pound on May 29th. This rise is due to production problems caused by strikes, maintenance shut downs, feed disruptions, politics, and the closure of the Buick smelter in the United States.

As a result, U.S. stocks have dropped 85,000 tons since May 1986, while LME inventories fell 51,000 metric tons, leaving April 1987 inventories at 31,500 tons in the United States and 13,400 tons on the LME. This is the lowest level inventories have been since 1979.

Secondary smelting capacity continues to diminish in the U.S. with the latest casualty being Chloride's Tampa smelter, which shut down in January because of environmental problems. The remaining secondary smelters appear to be running close to capacity. Scrap supplies remain tight, which has caused prices to rise and the smelters to scramble to obtain sufficient feed.

Material shortages will probably occur as early as August and continue through the fall battery industries' heavy demand period. Prices will remain in the mid to upper $.30 per-pound range, possibly even pushing into the $.40 per-pound range as demand exceeds supply. (T.A. Parker, Exide Corporation, Horsham, PA)

8/21/87 A6910-1

National Association of Purchasing Management

Report On Business®

August 3, 1987
Volume 5, Number 8

Purchasing Index Hits 3 Year High

New Orders & Production Expand

Prices Higher For Eleventh Month

Analysis by the Business Survey Committee; chairman, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

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July Report

The economy continued to expand in July, say the nation's purchasing managers in their latest **Report on Business.** Production increased, but somewhat slower than in May and June, while new orders expanded at a faster pace than in the past two months. The speed of vendor deliveries slowed for the tenth consecutive month, reflecting steadily growing production demand and shortages in certain commodities. Inventories declined in July, due likely to these shortages, combined with the large number of plants closing for vacation and or maintenance. Employment also declined, after four consecutive months of expansion; and for the eleventh consecutive month, purchasers reported more price increases than decreases. In answer to special questions, 70% of those queried reported their overall prices are now an average of 3.4% higher than at the end of 1986. Overall, all members anticipate an additional 2.3% average price increase by the end of 1987. Seventy-three percent of all respondents said their companies export, with 42% reporting a moderate improvement in export orders over the past two months, 6% a substantial improvement, and 51% reporting no improvement at all. Of the 48% reporting improvement, 56% said their products were short cycle (within three months), 14% long cycle (over three months), and 30% both. Respondents who import totaled 81%, with 32% indicating a moderate decrease in their imports over the past two months, 4% a substantial decrease, and 64% reporting no decrease at all. For the remainder of 1987, 55% expect to import at the same level, 24% expect a moderate increase, 18% a moderate decrease and 3% a substantial decrease.

The report was issued today by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of materials management, Pitney Bowes, Inc. Mr. Bretz said, "As predicted last month, the economy is very healthy entering the second half of 1987. Considering the normal seasonal slowing in July, production was very strong. The robust expansion in new orders portends continued growth in the third quarter."

The **Purchasing Managers' Composite Index** increased this month to 58.2% from 57.3% in June, making this the twelfth consecutive month this indicator has registered over 50%. Moreover, the 58.2% is the highest since May 1984 (58.6%). "The index has averaged 55.5% for the first seven months of 1987," Mr. Bretz said, "and based on past experience, if this average continues for the remainder of the year, it would be consistent with real GNP growth of about 3.5%." A reading above 50% generally indicates that the economy is in an expanding phase; below 50%, that the economy is generally declining. The index is based on analysis by the U.S. Department of Commerce. Except for this index, the information in this report is not seasonally adjusted.

Net Difference

In each category measured, this report shows a net difference. It is the difference between the number of responses in the positive direction (higher, better, faster) and the negative direction (lower, worse, slower). Analysis of the month-to-month difference compares the rate of change.

Employment

Employment declined in July, the first downturn after four consecutive months of growth. Prior to March 1987, however, members reported 29 consecutive months of employment decline.

Employment %	Higher	Same	Lower	Net Differ.
July	14	69	17	– 3
June	18	70	12	+ 6
May	17	72	11	+ 6

Buying Policy

Lead times for production materials lengthened, with the number of members reporting lead times of 60 days or less shrinking to 76% from 81% in June. Lead times for capital expenditures were slightly longer in July, with those reporting lead times of 30 days or less decreasing to 15% from 18% in June. Lead times for maintenance, repair and operating (MRO) supplies also expanded modestly, with the number of members reporting lead times of 30 days or less declining to 81% from 84% in June.

	Hand to Mouth	30 Days	60 Days	90 Days	6 Months and Longer
Production Materials %					
July	16	40	20	15	9
June	15	43	23	11	8
May	16	36	23	18	7
MRO Supplies %					
July	40	41	12	6	1
June	40	44	9	5	2
May	40	45	8	4	3
Capital Expenditures %					
July	9	6	10	19	56
June	9	9	10	16	56
May	13	7	11	17	52

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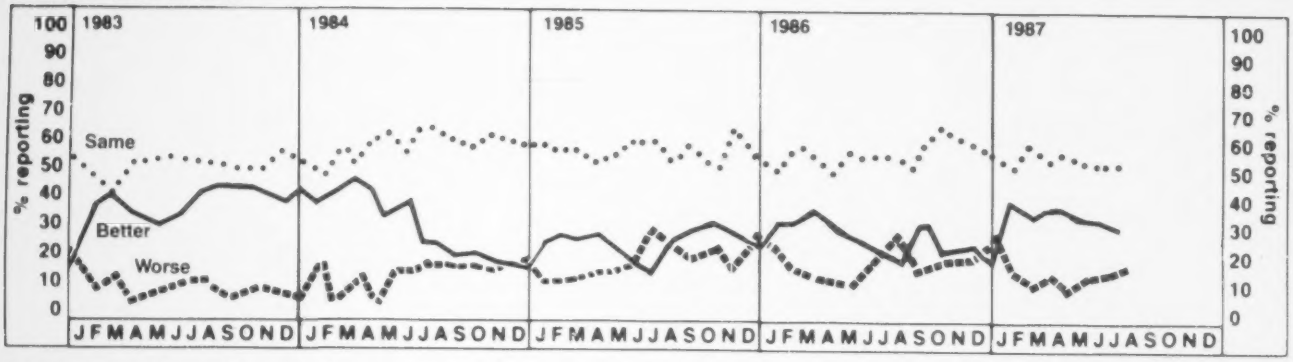
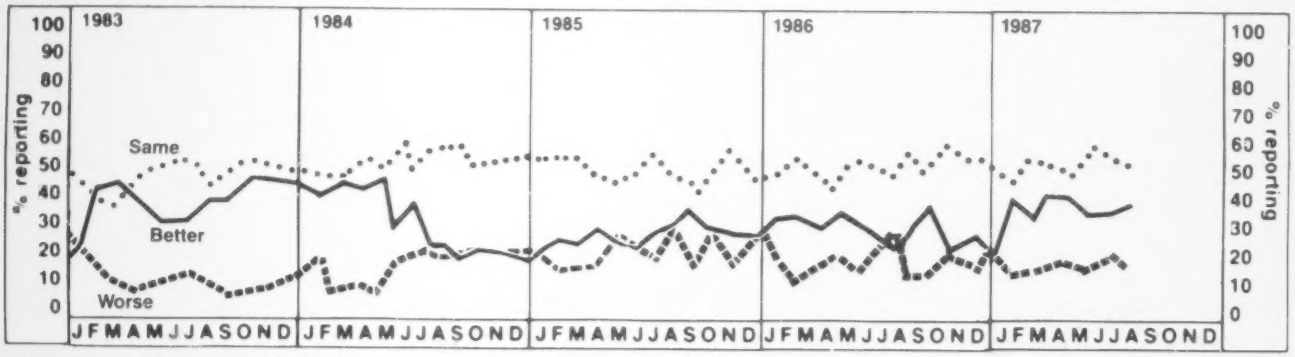
Production



For the seventh month, production grew, although the rate of growth was slower in each of the past three months. Nevertheless, considering the season, July production was strong.

Production %	Better	Same	Worse	Net
July	30	55	15	+15
June	32	55	13	+19
May	33	56	11	+22

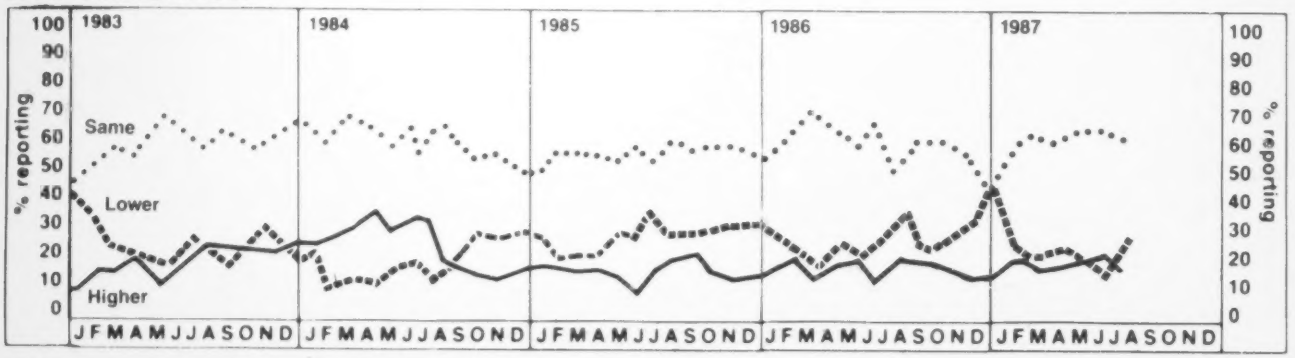
New Orders



New orders expanded in July for the seventh consecutive month at a faster pace than reported in May and June. This strong showing will no doubt result in continued production growth over the balance of the third quarter.

New Orders %	Better	Same	Worse	Net
July	39	48	13	+26
June	35	50	15	+20
May	34	55	11	+23

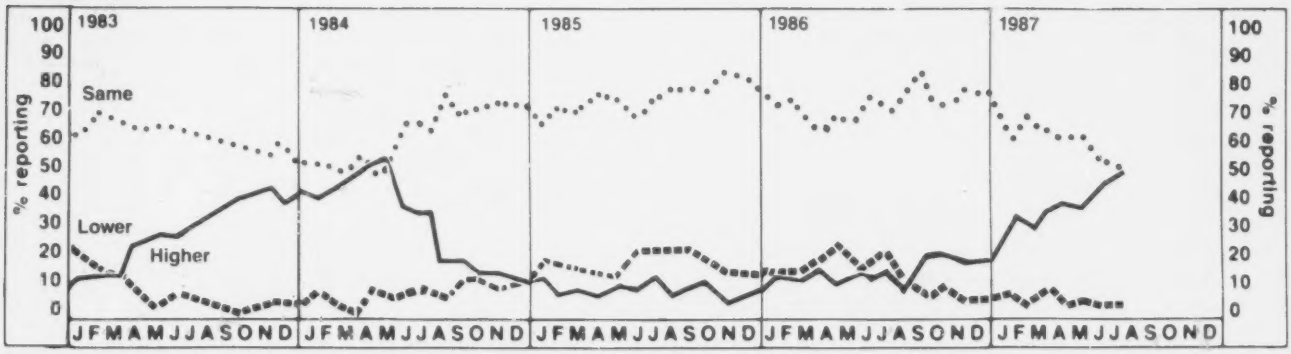
Inventories



Purchasers once again pared their inventories in July, after reporting an increase in June. June's increase had been the first in 34 consecutive months. Some of this reduction was not likely voluntary, however, and was linked to certain commodity shortages and the many plants closed for vacations and maintenance.

Inventories %	Higher	Same	Lower	Net
July	13	59	28	−15
June	19	64	17	+ 2
May	18	64	18	0

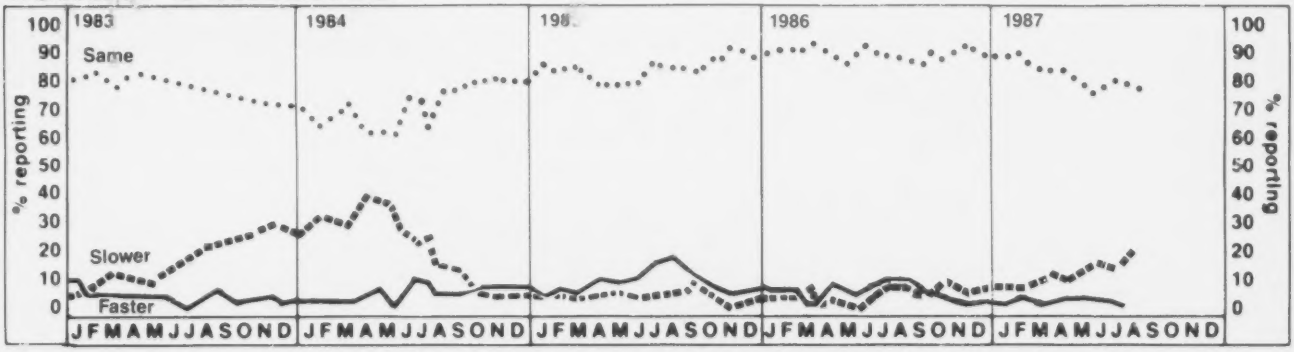
Prices



July is the eleventh consecutive month more purchasers reported paying higher prices (50%) than lower (2%). The 48% net difference is the largest since April 1984 (51%). However, purchasers expect only an additional 2.3% price increase in the last five months of 1987.

Prices %	Higher	Same	Lower	Net
July	50	48	2	+48
June	48	50	2	+46
May	38	59	3	+35

Vendor Deliveries



Vendor deliveries slowed substantially in July, and for the ninth consecutive month, reflecting the economy's continued improvement. The number of members reporting slower deliveries this month rose to 20%, the highest since July 1984 (28%). However, there's no doubt some of this slowness stems from shortages of steel resulting from the lengthy U.S. Steel strike.

Vendor Deliveries %	Faster	Same	Slower	Net
July	3	77	20	−17
June	5	80	15	−10
May	7	77	16	− 9

Specific Commodity Changes

The only item reported down in price in July was natural gas (fourth consecutive month). Two steel products (cold rolled sheets and steel plates) were reported in short supply for the second consecutive month. Also noted as being in short supply were styrene and caustic soda (second consecutive month). Metals, paper, fuel and petroleum-derived chemicals, resins, and plastic products again dominated items up in price. Linerboard, corrugated shipping containers (fifteenth time in the past sixteen months), and printing paper were all reported higher priced. Also reported as higher in price were diesel fuel and fuel oil (sixth time in past seven months). Metals reported up in price were steel (tenth time in past eleven months), steel plate, stainless steel sheets, zinc (second consecutive month), brass (second time in last four months), copper (fifth consecutive month) and aluminum (sixth consecutive month). Chlor-alkali chemicals were also reported higher in price: chlorine (second consecutive month), caustic soda (eighth consecutive month) and soda ash (second consecutive month). Petroleum-derived chemicals and plastic-related items up in price were polystyrene (third consecutive month), polyethylene (second consecutive month), latex (second time in the past three months), propylene (third consecutive month), phenolic resins (fourth time in the past five months), polyethylene resins, and plastic resins and products (both second consecutive month).

UP in Price: Printing paper, corrugated shipping containers, kraft linerboard (used in making corrugated containers), chlorine (used heavily in making bleached paper and paper board), caustic soda and soda ash (used heavily in petroleum refining and paper-making), aluminum, brass, copper, zinc, steel (particularly stainless sheets and steel plate), polystyrene (used chiefly in making synthetic rubber, resins and plastics), plastic resins, polyethylene resins, polyethylene, propylene (used in making thermoplastic plastics or fibers), phenolic resins (used in making plastic products), plastic products, latex (used in synthetic rubber products) and miscellaneous chemicals.

DOWN in Price: Natural gas.

In SHORT Supply: Steel plate, stainless steel sheets, styrene and caustic soda.

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Note: The next issue of the *Report on Business* will be available Sept. 8, 1987.

Commodity Reports

Paper Products

Prepared by the N.A.P.M. Paper Committee; chair, Glenn Farber, C.P.M., Vanier Graphics Corporation, Santee, CA.

If you've ever felt sorry for your paper mill salesperson, take a look at the March issue of *Pulp and Paper*, which reports on the 1986 earnings and record price levels of paper company stocks. Specifically, 1986 earnings were up 29.7% over 1985. Further, the price levels of some of the major paper companies' stocks were up some 22% early this year compared with 1986. This profitability and increased value of stocks has been the result of serious cost-cutting and equally serious improvements in productivity, for which the paper industry is to be congratulated.

As of this writing, several paper companies have one or more mills on strike or potentially ready for a strike. It seems 1987 will go down in these chronicles as an extremely challenging year!

Newsprint

The supply of newsprint is getting tight and mills are watching incoming orders closely. Operating rates in Canada for early this year were in the range of 99%, while that of the U.S. was slightly less, at about 95%, so it looks as if supplies will remain somewhat tight, at least for the balance of the year. Approximately 163,000 metric tons of added capacity are due in North America in 1987, with inventories increasing when material becomes available. A price increase was posed for July 1st, with a good chance of another increase occurring late this year or early in 1988. One major Canadian mill settled its labor contract, which will most likely reduce the chances for any major stoppages in eastern Canada.

Uncoated Groundwood

The supply of this grade is "firm," however, some increased demand has been prompted by the extremely tight coated-groundwood market. Deliveries are running from five to eight weeks with some inventory building. Prices are increasing, but the latest prices should hold at least through the fourth quarter.

Coated Groundwood

Coated groundwood, like the weather, is very changeable at present. As per our last report, this commodity was readily available and excess capacity prevailed. However, as so often happens in the paper industry, this grade has completely turned around and is extremely tight, with some allocations and lead times extending to 90 days. But much of this could be caused by inventory building for the Christmas publications, since inventory building is common in the third quarter, so the commodity will likely remain tight through the third quarter and probably the fourth quarter. Prices increased July 1st, with a good chance of further increases occurring if demand stays strong; however, this grade does have a history of fluctuation. Coated groundwood and coated free sheets have been the leading gainers in the first four months of 1987 with an increase of about 7.9% in production. Additionally, imports have risen some 29% from last year's level.

Uncoated Free Sheet

The demand for uncoated free sheets has leveled somewhat from the dramatic growth of 1986. Production through the first four months of 1987 is up only 2.7% from the comparable period in 1986. This grade is readily available and rumors about orders being exported are plentiful; however some delays could be encountered due to labor situations at some major mills. No additional capacity is expected to come on in 1987, but two large machines are scheduled to start up in late 1988. Inventories remain constant except for an occasional build-up in anticipation of often announced, but seldom implemented, price increases. However, it is likely some increase will stick around the fourth quarter.

Coated Free Sheet

This particular grade is not as tight as its companion, coated groundwood, but is suitably comfortable in demand to satisfy the producers, and should remain so in the near term, as one machine is scheduled to come on line late this year. Pricing is firm, with little discounting. Coated free sheet also typically experiences some inventory building around the third quarter, and is a good grade for foreign mills to export into the U.S.

Bleached Bristols

This grade, like uncoated free sheet, is readily available with fast deliveries and producers looking for business. Expectations are that it will remain stable for the balance of the year, with no additional capacity expected. Inventories are stable or slightly decreasing, while pricing is stable with discounts still prevalent.

Paperboard/Linerboard

These grades are the second leading gainer in production for 1987 compared with 1986. Demand still remains strong, especially in containerboard, with inventories continuing to decline. Meanwhile, exports of various paperboard grades continue to be very strong with some grades at record levels. The East reports SBS backlogs are weakening, while the West says mills are tight and on allocation. SUS backlogs are stable, with some added capacity scheduled in 1988. In the East, price reports for SBS are stable, while Western buyers report an increase; prices for SUS are uniformly stable. Linerboard increases for the second quarter apparently did not materialize, so another attempt will probably happen later this year.

Pulp

Pulp production remains very strong to date, running over 7% above last year. In fact, pulp mills posted an operating rate of 104% through the first four months of this year. There is little added capacity scheduled for pulp and thus the consensus is that it should remain strong for some time to come.

Packaging and Containers

Prepared by the N.A.P.M. Packaging and Containers Committee; chair, Carl D. Dirkse, C.P.M., S.C. Johnson & Son, Inc., Racine, WI.

The packaging market is changing dramatically. After several years of overcapacity and depressed prices, there are now shortages of some materials and price increases nearly across the board. Exports continue strong due to the weak dollar, but conversely, the weak dollar restricts imports. The Fredonia Group reports that industrial packaging shipments are projected to grow 6.4% annually. Microwaveable packaging is showing the most dramatic growth; overall, a 70% annual growth rate is being projected between now and 1991.

Metal Cans

There is more than adequate capacity in the can manufacturing facilities, but lead times are lengthening due to longer delivery times on steel raw material. Prices are stable, while metal cans continue to lose business to plastic containers. Some investors and industry executives are purchasing the can division of the Carnation Company.

Fibre Cans

The fibre can market has been weak for some time due to the switch to plastic and the consolidation of suppliers. However, some higher prices are being reported, as linerboard increases are being passed through.

Glass

After many plant shutdowns and the loss of business to plastics manufacturers, the glass industry seems to be settling down. Supply is adequate but plant capacity is being fully utilized, and full lead times are required. An attempt was made to increase prices in the second quarter, with little success. Glass companies are trying to capitalize on the growing concern about the disposal problems associated with plastic containers.

Molded Plastics

Molding capacity is adequate, but some shortages of resin are appearing. As a result, resin prices are increasing, which in turn affects the prices of molded products. Molded plastic containers continue to capture business from glass and metal container makers; metal can replacement by plastic amounts to over 1 billion units annually. Demands are increasingly being voiced to find a way to make plastic containers recyclable.

Films

Films are the fastest growing industrial packaging material; growth is projected at 9% annually between now and 1990. Current capacity is tight but adequate. Prices are rising due to resin price increases.

Laminated Stock

Supply is adequate but some price increases are being experienced due to higher prices in raw materials.

Metal Drums

Supply continues to be more than adequate. For the first time in years, there is one report of a price increase, due to the increased cost of steel.

Fibre Drums

Fibre drum makers are losing some business to plastic drum manufacturers. Supply is adequate. Some price increases are being experienced due to the rise in linerboard prices.

Folding Cartons

Here is a market that has changed significantly: after several years of overcapacity and depressed prices, there are now higher operating rates, particularly at the paperboard level. As a result, lead times are lengthening and prices are increasing. Demand is growing for liquid containers.

Corrugated

The corrugated market continues strong due to heavy domestic demand and a significant export business. Some tightness in availability is being reported. The $350.00/ton linerboard price seems to be settling in; however, there is talk about another possible increase between the third quarter of 1987 and the first quarter of 1988. Plans are afoot to negate this increase.

Bags

Supply is adequate for both plastic and paper bags, but prices are rising due to increasing costs for paper and plastic resin. The battle for market share between paper and plastic bags continues.

10/16/87 AG910-1

National Association of Purchasing Management

Report On Business®

September 8, 1987
Volume 5, Number 9

Index Highest Since April 1984

New Orders, Production, Expand 8th Straight Month

Deliveries Slowest Since July 1984

Analysis by the Business Survey Committee; chairman, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

The *Report on Business* is published monthly by the National Association of Purchasing Management, based on data compiled from replies to questions asked of purchasing managers in some 250 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification category, based on each industry's contribution to national income.

August Report

The economy expanded again in August, say the nation's purchasing managers in their latest **Report on Business.** Production grew at a higher rate than in the past three months. New orders also expanded, but at a somewhat slower pace than in July. The speed of vendor deliveries slowed for the 11th consecutive month, reflecting strong growth in production. Inventories increased in August after a decline in July. Employment also expanded for the fifth time in the last six months. For the 12th consecutive month, more purchasers reported price increases than decreases.

The report was issued today by Robert J. Bretz, C.P.M., chair of the National Association of Purchasing Management's Business Survey Committee, and director of materials management at Pitney Bowes, Inc. "The economy continued its vigorous growth in August," Bretz said. "Production was exceptionally strong, considering the normal seasonal slowing, and appeared to be aided by some inventory build-up. The continued rise in new orders virtually assures an excellent third quarter."

The **Purchasing Managers' Composite Index** advanced briskly to 59.9%, from 58.2% in July, the 13th consecutive month this indicator has registered over 50%. The 59.9% is the highest since April 1984 (61.0%). Notes Bretz: "The index has averaged 56.1% for the first eight months of 1987. Based on past experience, if this average were to be maintained for the remainder of 1987, it would be consistent with real GNP growth of 3.7%." A reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The index is based on analysis by the U.S. Department of Commerce. Except for this index, the information in this report is not seasonally adjusted.

Net Difference

In each category measured, this report shows a net difference, the difference between the number of responses in the positive direction (higher, better, faster) and the negative direction (lower, worse, slower). Analysis of the month-to-month difference compares the rate of change.

Employment

After declining in July, employment grew again in August, marking the fifth time it has expanded in the past six months. This is significant, considering February 1987 ended a string of 29 consecutive months in which members reported declining employment.

Employment %	Higher	Same	Lower	Net Differ.
August	16	71	13	+ 3
July	14	69	17	− 3
June	18	70	12	+ 6

Buying Policy

For the second consecutive month, lead times have expanded for production materials, as the number of members reporting lead times of 30 days or fewer has declined to 54% from 56% in July and 58% in June. Lead times for capital expenditures declined, as only 50% reported lead times of six months and longer, down from 56% in July and June; this month's level is the lowest since November 1985 (48%). The lead times for maintenance, repair and operating (MRO) supplies also declined as the number of members reporting lead times of 30 days or fewer rose to 86%, up from 81% in July and 84% in June.

	Hand to Mouth	30 Days	60 Days	90 Days	6 Months and Longer
Production Materials %					
August	14	40	28	13	5
July	16	40	20	15	9
June	15	43	23	11	8
MRO Supplies %					
August	41	45	9	5	0
July	40	41	12	6	1
June	40	44	9	5	2
Capital Expenditures %					
August	8	7	11	24	50
July	9	6	10	19	56
June	9	9	10	16	56

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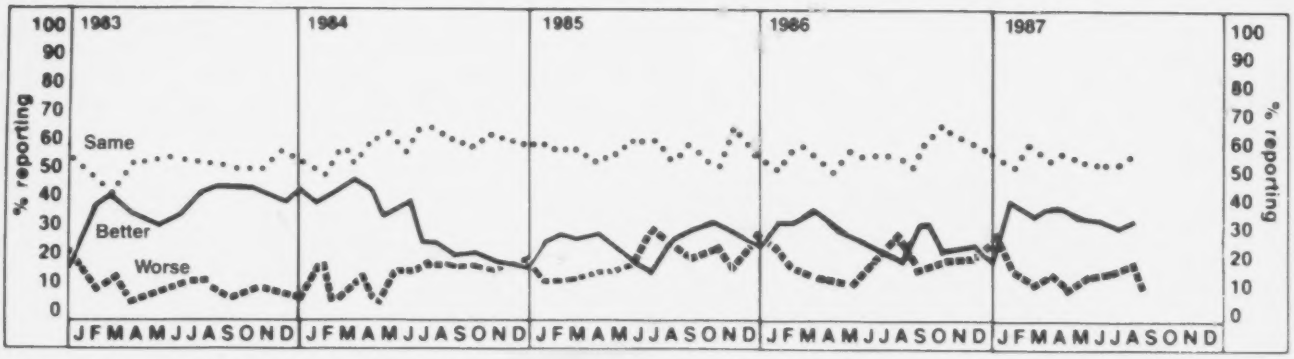
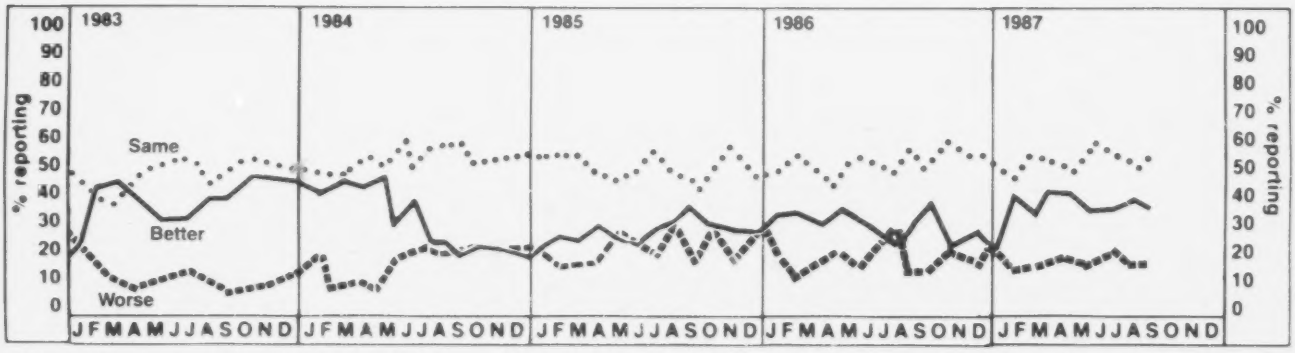
Production



Production grew again in August, for the eighth consecutive month. The rate of growth was the highest since April 1987 and, when normal seasonal slowing is taken into account, showed exceptional vigor.

Production %	Better	Same	Worse	Net
August	33	59	8	+25
July	30	55	15	+15
June	32	55	13	+19

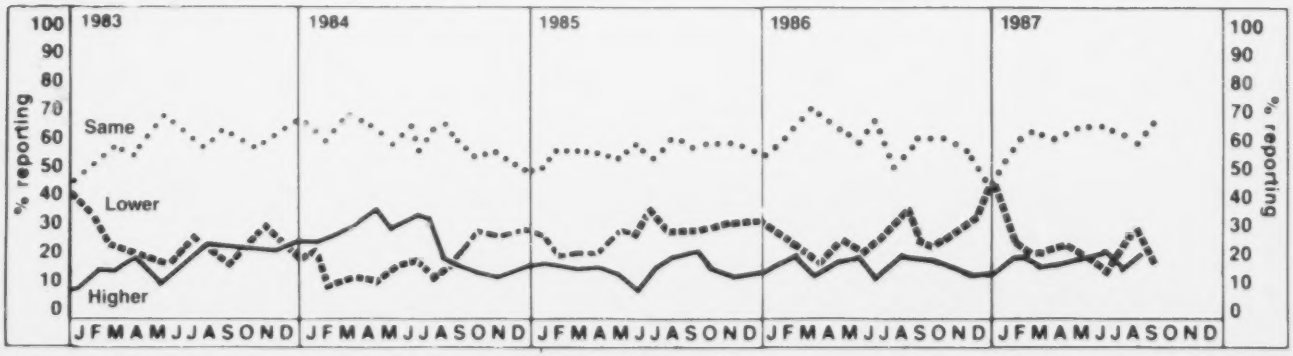
New Orders



New orders grew in August for the eighth consecutive month. Although the rate of growth was slower than last month, the 36% reporting better new orders signals a robust third quarter for production.

New Orders %	Better	Same	Worse	Net
August	36	51	13	+23
July	39	48	13	+26
June	35	50	15	+20

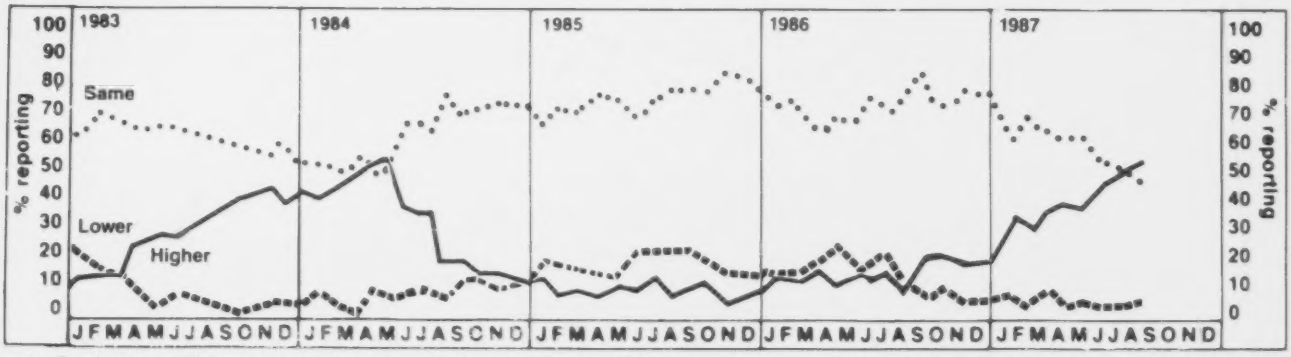
Inventories



Purchasers increased their inventories in August for the third time in the past four months. Some members indicated their increase was in response to a slowing of deliveries; others said they were attempting to bring in products earlier than needed to lessen the effects of announced price increases.

Inventories %	Higher	Same	Lower	Net
August	18	65	17	+ 1
July	13	59	28	−15
June	19	64	17	+ 2

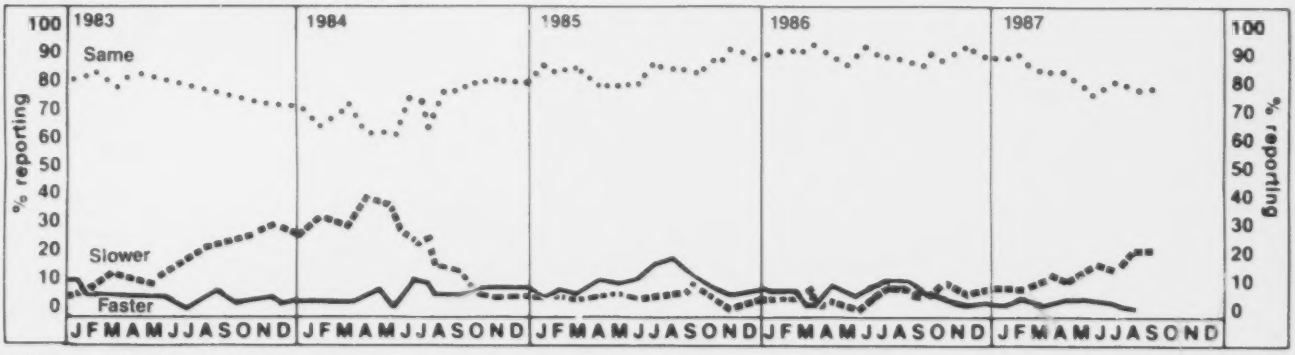
Prices



In September 1986, more purchasing managers reported price increases than decreases, beginning a string of 12 consecutive months in which this has occurred. In August, 52% reported paying higher prices, the most to so report since April 1984 (55%); only 3% reported lower prices. Even so, purchasers still do not expect significant price increases for the balance of 1987.

Prices %	Higher	Same	Lower	Net
August	52	45	3	+49
July	50	48	2	+48
June	48	50	2	+46

Vendor Deliveries



Vendor deliveries slowed in August for the 11th consecutive month, mirroring the strength in production. The 18% net difference between those reporting slower deliveries (20%) and those reporting faster (2%), is the greatest since July 1984 (19%). Purchasers continue to report difficulty in receiving many metal- and plastic-related chemicals and resins on schedule.

Vendor Deliveries %	Faster	Same	Slower	Net
August	2	78	20	−18
July	3	77	20	−17
June	5	80	15	−10

Specific Commodity Changes

Reported lower in price in August were benzene (after being reported higher priced for six of the previous eight months), styrene (after being reported up in price for five consecutive months) and natural gas (lower for the fifth consecutive month). Steel, steel plates and cold rolled steel sheets were reported in short supply for the third consecutive month. Caustic soda was also reported in short supply (third consecutive month), as were plastic resins. Titanium dioxide, reported short in supply for 10 of the 12 months ending February 1987, was also reported short in August.

Linerboard and corrugated shipping containers were reported higher in price for the 16th time in 17 months. Chlorine (third consecutive month), caustic soda (ninth consecutive month), and many miscellaneous chemicals were also reported up in price. Petroleum-derived chemicals and plastic-related items that have increased in price were ethylene, polypropylene, polyethylene, plastic resins and products (the latter two for the third consecutive month).

Numerous metals were reported higher priced, including steel (11th time in the last 12 months), steel plate and stainless steel sheets (both for the second consecutive month), aluminum (seventh consecutive month), brass (third time in past five months), copper (sixth consecutive month), zinc (third consecutive month), nickel and lead. Fuel oil was reported up in price (seventh time in the past eight months) as was diesel fuel (third time in the last four months).

UP in Price: Corrugated shipping containers, kraft linerboard (used in making corrugated shipping containers), chlorine (used heavily in making bleached paper and paperboard), caustic soda (used heavily in paper-making and petroleum refining), aluminum, brass, copper, lead, nickel, zinc, steel (particularly stainless steel sheets, steel plate, hot and cold rolled sheets), plastic reins, polyethylene, polypropylene (used in making thermoplastic plastics or fibers), plastic products, ethylene (used heavily in making plastic resins), fuel and diesel oil and miscellaneous chemicals.

DOWN in Price: Natural gas, benzene and styrene.

In SHORT Supply: Steel, steel plate, cold rolled steel sheets, caustic soda, titanium dioxide (a lead-free pigment used heavily as a whitener in coatings and in other industrial applications) and plastic resins.

The National Association of Purchasing Management's *Report on Business* records the actual changes and rates of change in five important categories of data: production, new orders, employment, inventories and vendor deliveries. These five components, as reported, are not adjusted to compensate for seasonal variations.

Economists have devised a variety of formulas to compensate data for seasonal variations. N.A.P.M. cooperates with the U.S. Department of Commerce, which prepares the monthly Purchasing Managers' Composite Index for publication by N.A.P.M. The Department of Commerce adjusts the five above-mentioned components of the *Report on Business*, applies various weights to each and combines them into a single index number. The Composite Index is based on analysis by the U.S. Department of Commerce, and is the only part of the report adjusted for seasonal variations.

Note: The next issue of the *Report on Business* will be available Oct. 5, 1987.

Commodity Reports

Energy

Prepared by the N.A.P.M. Energy Committee; chairman, Howard T. Perley, C.P.M., International Paper Company, Memphis TN.

Petroleum Products

Fuel oil prices continued to increase through the summer due to OPEC's renewed effort to maintain quotas, and the unstable conditions in the Persian Gulf. Gasoline and heating oil supplies remained stable as refineries maintained production levels. Current prices are expected to be maintained, with more potential on the upside than downside, as seasonal third quarter demand factors take hold. (Terry Palmer, C.P.M., Standard Oil Production Company, Dallas, TX)

Natural Gas

Gas supplies should be ample again this winter. While there may be regional spot shortages, particularly in Texas and Louisiana, widespread curtailments are unlikely. The current excess of supply over demand may not continue beyond 1990, because the U.S. is consuming more gas than it is finding. Following last year's decline in drilling activity, additions to well reserves are now only about a third of the volume produced. Production capability still exceeds consumption, but by the end of the decade the two may come into balance. Prices will likely then firm up and regional shortages will become more frequent. Spot prices for gas purchased directly from producers have not rebounded from last year's decline, but a further decline is not likely either. However, tariff prices for gas sold by local utilities will continue to drop this year and next. For end-users who make their own spot gas purchases, the margin of savings over tariff purchases will continue to decline. (Ian C. Mackenzie, C.P.M., Corning Glass Works, Corning, NY)

Coal

The coal industry continues to be in an over-capacity position, and industrial entities and utilities are making every effort to purchase their coal requirements on the spot market. This may be the time for small users, 100,000 ton year or less, to lock in their requirements for a longer term with a set escalator. The important factor in purchasing coal is to work on the delivered cost-per-million btu. Normally coal is 20%-40% of that delivered cost, so more attention should be placed on transportation. (Gary Chesnut, Ag Processing Inc., Omaha, NE)

Electricity

Price increases for 1988 and following years are expected to be quite moderate. Reductions in the capital component of the "average" utility's tariff rates will hold rate increases at a level from 1 to 2 percentage points below inflation. However, "average" expectations for electricity prices are totally misleading. New England customers particularly could see prices increasing above the rate of inflation. Each utility has construction programs, capital requirements and regulatory climates that are unique. These overshadow fuel and operating costs, which are more predictable as an "average." For the industry, capital costs comprise 46% of total costs. Fuel costs are also contributing to the control of electricity costs. Natural gas use by electricity generation sector is expected to increase by almost 10% in 1988. At the same time, the cost of natural gas to utilities is decreasing. Again, the effect of these fuel cost reductions will be felt very unevenly by industrial consumers. Historically, industrial consumers of electricity have been required to subsidize the residential customer class through rate structures that discount the lower cost of service to industrial users. Opportunities exist with most local utilities to reduce these "overcharges" through utilization of existing special rates, aggressive negotiations for contract rates, rate case interventions, and/or actual or proposed bypass of the utility through cogeneration applications. (George T. Gillespie, C.P.M., Abbott Laboratories, North Chicago, IL)

Steel

Prepared by the N.A.P.M. Steel Committee; chairman, Daniel R. Krause, C.P.M., The Budd Company, Troy, MI.

The first half of 1987 ends as one of the best six-month periods in recent years for the domestic steel mills. Order books were full and the major integrated mills are expected to report profitable operations. Present demand shows no signs of diminishing, particularly with coated sheets, hot and cold rolled sheets, and plates and structurals, with mills accepting orders for delivery up to 12-16 weeks out.

However, one has to look at the plethora of factors influencing the steel industry to understand the reasons for the extended leadtimes and recently announced price increases, when total domestic production will probably be, at best, 75 million tons, only 7% above 1986. Some of these factors have been: the long strikes at USX and Babcock and Wilcox, slowness of USX to attain full production, low customer inventories coupled with improving sales, and the idling of capacity from the 1985 and early 1986 level. Overall, both the industry and its customers underestimated the effects of an improving economy and the depreciating dollar on the demand for, and availability of, steel products.

Of great concern to the steel industry, especially those producing hot and cold rolled sheets, coated products, and plates, is the expiring labor contracts of some of the major steel consumers in the automotive, farm implement and construction equipment industries this fall and in 1988. Cutbacks in production from these customers could change the expected positive outlook for 1987 and 1988.

However, today's topsy-turvy steel marketplace will settle down somewhat during the last half of 1987 as supply and demand begin to get back into balance. And the price increases, which have been directed more at the steel service centers, will tend to fade away as the marketplace stabilizes. (Norris E. Caudell, Caterpillar Inc., Peoria, IL)

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National Association of Purchasing Management

Report On Business®

October 5, 1987
Volume 5, Number 10

Purchasing Managers' Index Hits 60.7%

Production, New Orders Rise Sharply

Prices Increase for 13th Straight Month

Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, inc.

The *Report on Business* is based on data compiled from replies to questions asked of purchasing managers in some 250 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification category, based on each industry's contribution to national income.

September Report

The economy continued to grow in September, say the nation's purchasing managers in their latest **Report on Business.** Production rose at the fastest pace in more than three years. New orders expanded for the ninth consecutive month at the highest rate since March. The speed of vendor deliveries slowed again, mirroring the vigorous growth in production. Employment growth continued in September for the sixth time in the past seven months. Inventories were flat after growing slightly in August. September marked the 13th consecutive month that more purchasers reported price increases than decreases.

The report was issued today by Robert J. Bretz, C.P.M., chair of the National Association of Purchasing Management's Business Survey Committee, and director of materials management at Pitney Bowes, Inc. "The economy ended the third quarter with what must be characterized as robust growth," Bretz said. "All indicators were positive. Furthermore, the healthy increase in new orders is a signal that the fourth quarter will begin on a high note."

The **Purchasing Managers' Composite Index** rose to 60.7% in September, up from 59.9% in August; this is the 14th consecutive month this leading indicator has registered over 50%. At 60.7%, the index is at its highest since April 1984 (61.0%). Notes Bretz: "The Purchasing Index has averaged 56.6% for the first nine months of 1987. Based on past experience, if this average were to continue for the remainder of 1987, it would be consistent with real GNP growth of 3.8%." A reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The index is based on analysis by the U.S. Department of Commerce. Except for this index, the information in this report is not seasonally adjusted.

Net Difference

In each category measured, this report shows a net difference, the difference between the number of responses in the positive direction (higher, better, faster) and the negative direction (lower, worse, slower). Analysis of the month-to-month difference compares the rate of change.

Employment

The rate of growth in employment advanced briskly in September, the sixth month of growth in the last seven. The strength in employment is even more significant considering February 1987 ended 29 consecutive months of employment decline.

Employment	% Higher	% Same	% Lower	Net
September	19	68	13	+6
August	16	71	13	+3
July	14	69	17	−3

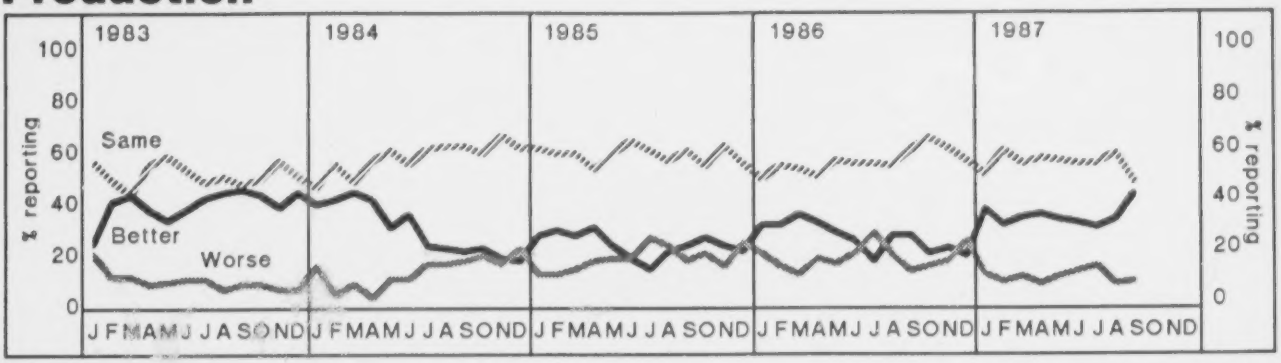
Buying Policy

After two consecutive months of expanding lead times for production materials, lead times declined as the number of members reporting lead times of 30 days or fewer rose to 58%, up from 54% in August and 56% in July. Lead times for capital expenditures lengthened somewhat as the number of purchasers reporting lead times of six months and longer rose to 52%, up from 50% in August, which was the lowest level since November 1985 (48%). Lead times for maintenance, repair and operating (MRO) supplies lengthened also, as the number of members reporting lead times of 30 days or fewer declined to 82%, down from 86% in August.

	Percent Reporting				
Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Months and Longer
September	17	41	22	13	7
August	14	40	28	13	5
July	16	40	20	15	9
MRO Supplies					
September	42	40	11	5	2
August	41	45	9	5	0
July	40	41	12	6	1
Capital Expenditures					
September	10	8	13	17	52
August	8	7	11	24	50
July	9	6	10	19	56

Report on Business is published by the National Association of Purchasing Management, Inc., 2055 East Centennial Circle, Post Office Box 22160, Tempe, Arizona 85282-0960. Telephone: 602/752-NAPM (752-6276). Telecopier: 602/752-7890. Distributed 12 times a year to N.A.P.M. members. Additional subscriptions are $50 a year for members, $100 for nonmembers. Add $25 outside the United States, Canada and Mexico.

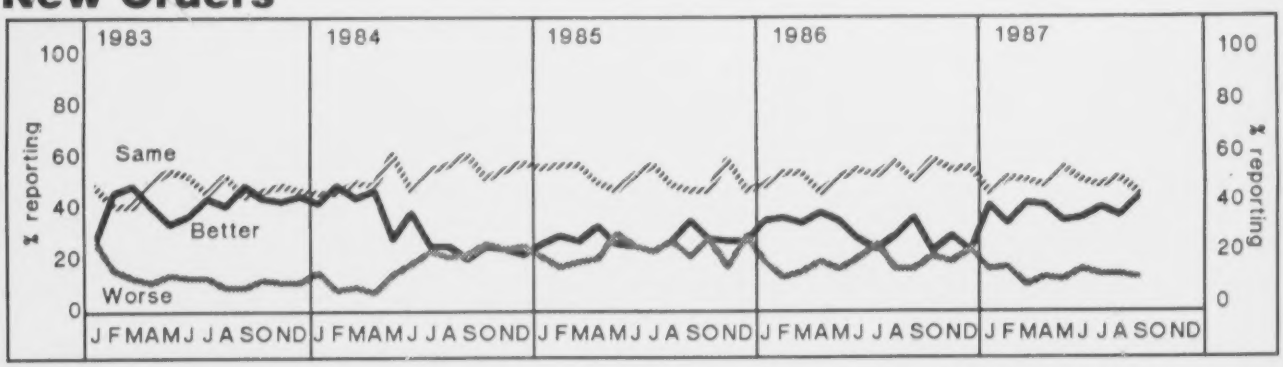
Production



The rate of increase in production rose sharply in September, the ninth consecutive month of growth. The 43% reporting better production is the most since March 1984 (44%). Viewed in light of normal seasonal slowness, this index shows exceptional strength, with the net difference between those reporting better (43%) and worse (9%) rising to a vigorous +34, the highest in more than three years.

Production	% Better	% Same	% Worse	Net
September	43	48	9	+34
August	33	59	8	+25
July	30	55	15	+15

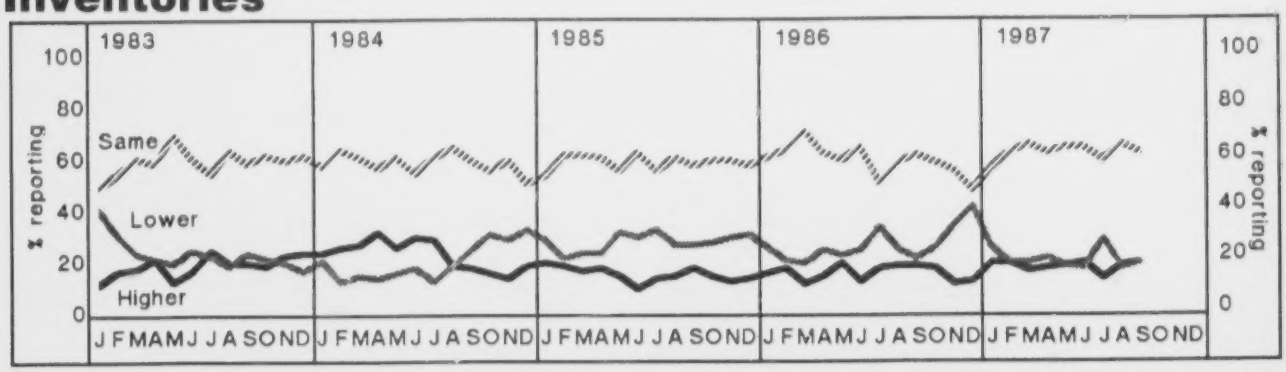
New Orders



New orders rose briskly in September, continuing a nine-month trend of expansion. The 43% of purchasing managers who reported better new orders is the highest since April 1984 (46%) and virtually assures that production will be strong entering the fourth quarter.

New Orders	% Better	% Same	% Worse	Net
September	43	45	12	+31
August	36	51	13	+23
July	39	48	13	+26

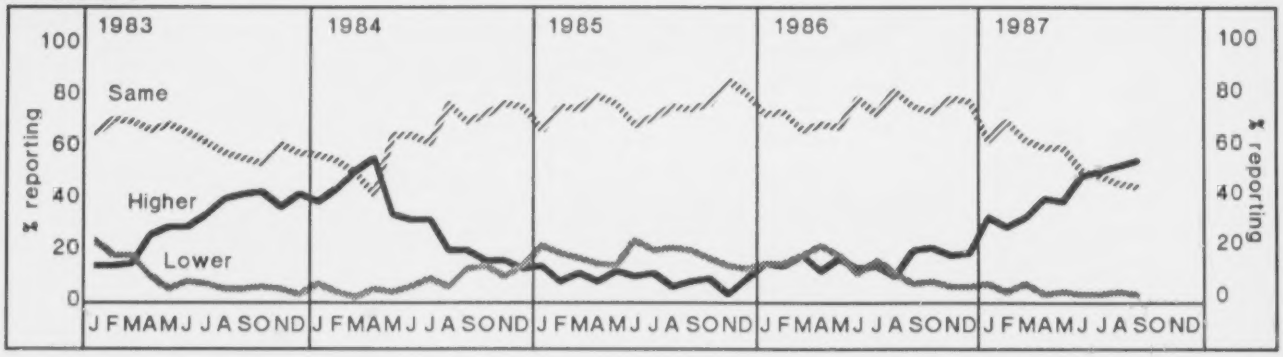
Inventories



After increasing their inventories in two of the past three months, the percentage of purchasers who indicated their inventories declined in September (19%) was matched by the percentage of those reporting their inventories grew. Thus, the growth in production was not aided by a build-up in inventories.

Inventories	% Higher	% Same	% Lower	Net
September	19	62	19	0
August	18	65	17	+1
July	13	59	28	−15

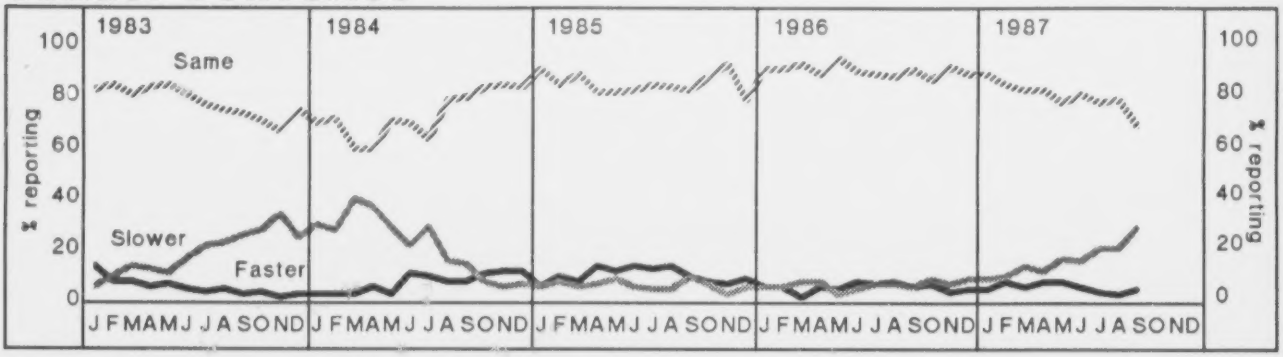
Prices



For the 13th consecutive month, more purchasers reported price increases than decreases. The net difference between those reporting higher prices (54%) and lower (2%) increased to +52, the highest since January 1981 (59%) and another reflection of a growing economy.

Prices	% Higher	% Same	% Lower	Net
September	54	44	2	+52
August	52	45	3	+49
July	50	48	2	+48

Vendor Deliveries



The speed of vendor deliveries slowed again in September, marking the 12th consecutive month this has occurred. The net difference between the number of purchasers reporting slower deliveries (28%) and those reporting faster (4%), is the highest since May 1984 (26%). This slowing, plus the short supply of many metal- and plastic-related chemicals and resins, reflects the impressive growth in production.

Vendor Deliveries	% Faster	% Same	% Slower	Net
September	4	68	28	−24
August	2	78	20	−18
July	3	77	20	−17

Specific Commodity Changes

Paper-related products reported higher in price in September were corrugated shipping containers (17th time in 18 months), printing paper (seventh time in past nine months), paper products, chlorine (fourth consecutive month) and caustic soda (10th consecutive month).

Metal products up in price were steel (12th time in last 13 months), various steel products, aluminum (eighth consecutive month) and copper (seventh consecutive month).

Petroleum-derived chemicals and plastic-related items reported higher priced were ethylene (second consecutive month), propylene, polypropylene (fourth time in past five months), polyethylene (fourth consecutive month) and plastic resins and products (both for the fourth consecutive month).

UP IN PRICE: Corrugated shipping containers, printing paper, paper products, chlorine (used heavily in making bleached paper and paper board), caustic soda (used heavily in paper making and petroleum refining), aluminum, copper, steel and steel products, plastic resins, polyethylene, polypropylene (used in making thermoplastic plastics or fibers), plastic products, propylene (used heavily in making polypropylene), ethylene (used heavily in making plastic resins).

DOWN IN PRICE: None

IN SHORT SUPPLY: Steel, steel plate, hot- and cold-rolled steel sheets, steel pipe, newsprint, chlorine, caustic soda and titanium dioxide (a lead-free pigment used heavily as a whitener in coatings, paper and other industrial applications).

The National Association of Purchasing Management's *Report on Business* records the actual changes and rates of change in six important categories of data: production, new orders, inventories, prices, vendor deliveries and employment. These six components, as reported, are not adjusted to compensate for seasonal variations.

Economists have devised a variety of formulas to compensate data for seasonal variations. N.A.P.M. cooperates with the U.S. Department of Commerce, which prepares the monthly Purchasing Managers' Composite Index for publication by N.A.P.M. The Department of Commerce adjusts the six components of *Report on Business* listed above, applies various weights to each and combines them into a single index number. The Composite Index is based on analysis by the Department of Commerce and is the only part of the report adjusted for seasonal variations.

The next issue of *Report on Business* will be available Nov. 2, 1987.

Commodity Reports

Textiles

Prepared by the N.A.P.M. Textile Committee. Chair: Gerry Korver, C.P.M., K-Products, Inc., Orange City, Iowa. Contributors: Larry N. Parkes, C.P.M., Champion Products, Inc., Rochester, New York; and Richard Blumenstein, Steelcase, Inc., Grand Rapids, Michigan.

Cotton, Polyester and Greige Goods

Business is excellent, with much varied activity. The textile and apparel industries are living in an inflationary environment different from that of industry in general. Price increases will be substantial for new raw material contracts, precipitated primarily by supply/demand conditions. General industry yarn and fabric capacities have eroded during the past five years because of increased imports, severely taxing remaining capacity. A reversal of imports in the apparel area has further taxed capacity.

Demand has increased for natural fibers, particularly cotton. The farm subsidy program has been very successful in allowing U.S. cotton to float in the world market. This, coupled with the value of the dollar, has created a very favorable export market for cotton. Exports for the 1986-87 crop year will nearly triple from last year. Uncertainties about the Chinese and Russian crops also continue to add strength to the market.

These conditions have caused cotton to move from $0.30 a pound in August 1986 to the high 70s and have created a more favorable atmosphere for synthetic fiber manufacturers to raise prices. On July 1, polyester staple increased $0.05 a pound; flat nylon increased $0.10 a pound; 200-denier nylon and textured nylon increased $0.25 a pound. The woven piece goods commission dyers announced an increase of $0.03 a yard effective October 1. Dupont announced a 6% Lycra increase effective September 1. Rayon staple prices will increase $0.05 a pound November 1. These increases are strictly raw material-related and are, in a sense, pent-up increases that were delayed because of business conditions. Labor, utilities and other cost increases are not taken into account.

The spun yarn market had difficulty holding prices in 1987. Although the fabric market has been reasonably successful in holding prices, this will change when existing contracts are consumed. 1988 may be a very difficult year to control prices. Based upon the above scenario, purchasers may anticipate prices up to 25% higher than those negotiated in the fourth quarter of 1986 and the first half of 1987. Cotton alone has increased 50%. Fabric prices will follow a similar pattern, but increases should be kept to less than 10% in most cases, with the exception of high-cotton-content fabrics.

Cost avoidances will be the name of the game. Prices will increase substantially; purchasers will need to be prepared for tough negotiations to limit the effects of these increases.

Specialty Fabrics

Growth in the world's wool market, coupled with increases in the price of synthetic fibers (polyester), has resulted in price increases for wool and wool blends. Although mill capacity is adequate, buyers must be willing to pay increases of 4% to 6% and should expect somewhat extended lead times.

Converting

Converting business remains strong with extended lead times. Pricing has shown small increases, but many converters are booked through the end of the year. Pricing will take a back seat to getting a realistic lead time buyers can live with.

Non-Ferrous Metals

Prepared by the N.A.P.M. Non-Ferrous Metals Committee. Chair: Sharon Sinke, C.P.M., Frost, Inc., Grand Rapids, Michigan.

Magnesium

An international conference on magnesium was held in May in Tokyo. A major topic of discussion was a proposed increase in the use of magnesium by the Japanese automotive market. Right now the use of magnesium in Japanese automobiles is very limited, although the Honda Formula I racing car uses quite a bit. In American cars the use of magnesium has increased to approximately two pounds per unit, mostly in air intake covers, ashtrays, doors and parts under the hood. Exterior parts are still a problem because of corrosion, but some recent work has been done to develop alloys of high purity. The high-purity alloys use very low levels of copper, iron and nickel, and improve resistance to corrosion by a factor of 100.

The Norwegians — Norsk Hydro — broke ground on their new smelter in Quebec last spring. At this printing, they are on schedule to be completed in 1989. At the Tokyo meeting, the Mineral Process Licensing Corporation announced it would build a new plant in Alberta with Alberta Natural Gas Company. Plant capacity is 12,500 tons for Phase I, 25,000 tons for Phase II, and 25,000 tons for Phase III, for a total capacity of 62,500 tons by 1992.

World use of magnesium is due to increase; these new facilities should meet the increased demand. *(Sharon Sinke, C.P.M., Frost, Inc., Grand Rapids, Michigan)*

Nickel

Nickel has been strong the past few months for several reasons. First, stainless steel uses half the worldwide nickel output. The stainless steel market has been very strong in Europe, the United States and Japan. Second, the Soviets were selling nickel in the open market; they recently cut back on sales by about half, which increased demand on other nickel producers. Finally, INCO's labor contract at its plating nickel facility expired September 15. Talks at press time appeared to be going well, but the outcome is uncertain.

Nickel's per-pound price of $2.50, which is controlled by the London metal market, is artificially inflated. Pricing should be between $2.00 and $2.50 a pound.

Two factors might influence the nickel market: if the Soviets re-enter the market, or if the demand for stainless steel slows down. *(George R.A. Milne, C.P.M., Delta Faucet Company, Indianapolis, Indiana)*

Brass and Bronze

Our March 1987 report indicated that the price of copper was rising. The Comex metal price at the time of that report was $0.63 a pound. On September 3, the Comex price was $0.7665 a pound.

Brass rod mills continue to be very busy. Delivery time for most sizes of rod is three to four weeks. Lead time for brass and bronze strip is approximately six to eight weeks.

Brass scrap prices continue to go higher. Since the beginning of 1987, buyers have seen an increase of approximately 20% in the price of scrap. As the demand for brass products continues to rise, buyers will probably see additional increases in the cost of fabrication.

During 1988, buyers should see a leveling of prices and possibly a slight reduction. It is projected that brass and bronze will be in adequate supply through 1988. *(Edward M. Straka, C.P.M., Baldwin Hardware Corporation, Reading, Pennsylvania)*

Tin

Tin is expected to remain in good supply for the next six months. Prices moved up from $3.00 this summer to a current $3.15. A range of $3.10 to $3.40 should prevail through the first quarter of next year. Surplus stocks still exist and are expected to keep a lid on prices. *(Anonymous)*

Aluminum

Few things in life are a certainty, but one of them is that the price of aluminum will certainly change, perhaps several times, before the beginning of 1988. It is almost impossible to predict the price of a commodity that is facing or will be faced with such conditions as the decreasing international inventory of basic material (pure), the possibility of a strike by one of the major producers in Canada, domestic production capacity in excess of 85%, a continuously escalating bull market in the usage of scrap in domestic secondary smelting and exporting to Pacific rim countries, a severe shortage of billet for extrusion and continued problems with the dollar.

With a spot price of $0.82 to $0.84 for unalloyed ingot and the producer price in the $0.78 to $0.80 range (producer alloy [355-356] $0.935 a pound, if not higher, by publication date of this article), it is not hard to visualize alloys being close to $1.00 a pound by year's end. Some primary alloys, e.g., Al Mag, are now being quoted at a minimum of $1.05.

The steady demand for aluminum coupled with shrinking inventories will help to maintain high ingot prices for the remainder of the year, quite possibly into the first quarter of 1988. Opinion varies as to an exception, i.e., if producers re-ignite some of the pot lines in "swing plants." Whether this aspect is being seriously considered is unknown.

Buyers must negotiate and do some extra planning to lock in a purchased price for future deliveries of material, especially for the fourth quarter. Certainly in the market we have now, a stated and agreed-upon price per pound is much better than P.T.S. *(Ted Campbell, C.P.M., Morris Bean & Company, Yellow Springs, Ohio)*